TECHNOLOGY DEPT.

NEW EQUIPMENT DIGEST

EQUIPMENT • IMPROVEMENTS • PROCESSES • MATERIALS • METHODS • APPLICATIONS • LITERATURE

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SEP 12 1944
DETROIT

Vol. 9 September, 1944 No. 9

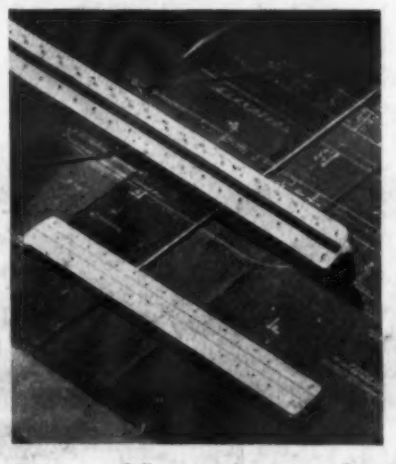
FOOT VALVE

Adaptable for use with air tools, air cylinders, flash welders, riveting machines and all other air operated equipment, this compressed air foot valve facilitates rapid handling of work. Safety of operator is provided by kick guard which prevents accidental operation.

Valve is furnished in locking and non-locking types. Pedal lock in locking type holds pedal in open position. Touch of toe releases lock. Simple adjustment of lever locking device prevents engagement of operating pedal and changes locking type to non-locking type. Net weight of device is 12½ pounds. Made by **Keller Tool Co.**, Dept. N, Grand Haven, Mich.

▲ Mention Item NED-5031 when writing ▲

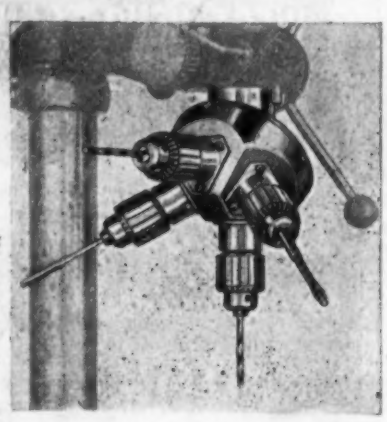
ENGINEER'S SCALES



Injection molded of Tenite plastic, cellulose acetate butyrate product of Tennessee Eastman Corp., Kingsport, Tenn., architects' and engineers' scales are claimed to be more accurate and less subject to warpage than similar scales made of boxwood to which strips of cellulose nitrate are cemented. These scales are white, with legible black lines and figures. Stripes in different colors painted on each side of triangular scales facilitate finding desired scale. Molded by American Molding Co. Distributed by **A. Lietz Co.**, 913 S. Grand Ave., Los Angeles 15, Calif.

▲ Mention Item NED-5032 when writing ▲

DRILL PRESS TURRET



Attached to any standard drill press, Quadrill turret attachment increases capacity of machine fourfold. Desired tool can be placed in work position with simple adjustment, eliminating necessity of changing tools for any combination of four operations in drilling, counterboring, reaming, center drilling, countersinking, spot facing and other work. Only tool in working position operates and other three remain stationary. Entire unit is assembled to quill and is driven by drill press spindle.

Hardened friction starter and driver assure smooth, positive operation. Four hardened and ground spindles are fitted with No. 32 Jacobs chucks or their equivalent. Ball bearings are used in spindle assemblies. Made by **Chicago Drillet Corp.**, 919 N. Michigan Ave., Chicago 11, Ill.

▲ Mention Item NED-5033 when writing ▲

HELP! HELP!

To assure effective use of each copy of NEW EQUIPMENT DIGEST, we like to hear from each individual to whom it is addressed at least once per year. Slight revisions have been made in the regular inquiry slip enclosed in this issue to facilitate our checking. If you have not returned one of our regular mail questionnaires or inquiry slips within the past year, please furnish us with the information requested on the back of the inquiry slip.

FLAME CUTTING MACHINE

Usable in any industry where flame cutting is part of fabrication process, Model ISC electronic flame cutter is fully automatic and utilizes space on both sides of machine, thus increasing production. Device translates record markings into movement and electronic control accurately guides cutting torches along any desired contour in horizontal plane. Contour is pre-determined by markings on cylindrical records. Claimed features include ease of manipulation, elimination of errors, speed of cutting and elimination of other normally time-consuming operations.

Plastic control records are small, light, durable and easily handled. Plates may be reproduced from original records either successively, intermittently or in widely separated locations. They may be reused unlimited number of times. Where duplicate work is being performed in separate plants, records may be transferred from one location to another. Made by **Struthers Wells Corp.**, Titusville, Pa.

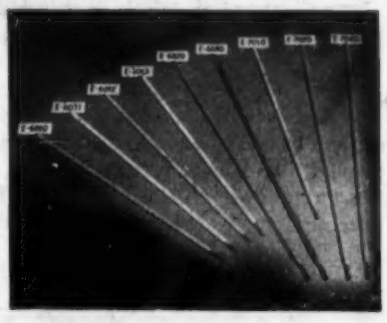
▲ Mention Item NED-5034 when writing ▲

PLASTICS MOVING PICTURE

Tracing story of cellulose from cotton fields where cotton linters are transformed into cellulose derivatives, to testing laboratories and finally to manufacturing plants where end products are made, "Careers for Cellulose" is 16-millimeter, all-color sound moving picture. It is available for exhibition without cost by engineering societies and other groups who can supply sound projector and operator. Technical details showing manufacture of cellulose, cellulose acetate, nitro cellulose and ethyl cellulose, bases for plastics, lacquers, film, rayon and many other articles are shown. Applications for cellulose in newer plastic developments are covered. Issued by **Hercules Powder Co.**, Wilmington, Del.

▲ Mention Item NED-5035 when writing ▲

ARC WELDING ELECTRODES



Featuring quiet arc characteristics, series of smooth flowing arc welding electrodes is available in both alternating and direct current types. They utilize standard American Welding Society number and color, simplifying selection and handling. Made by **Allis-Chalmers Mfg. Co.**, 6900 Norman St., Milwaukee 1, Wis.

▲ Mention Item NED-5036 when writing ▲

Do You Know?

■ LIGHTER than rock wool, fiber glass or cork, new plastic foam has lower heat conductivity than any of these three. Restricted in use now, this material promises to have many postwar applications. Material is self-raising and self-curing. Mixture resembles molasses, begins to foam or expand within 2 to 5 minutes after mixing and cures without application of heat. Weight is less than 2 pounds per cubic ft. Developed by General Electric Co., 1 Plastics Ave., Pittsfield, Mass.

▲ Mention Item NED-5037 when writing ▲

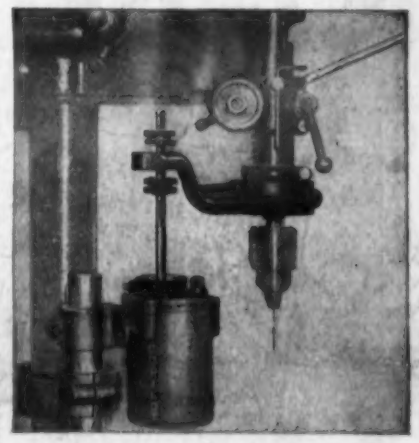
Approximately 2,500,000 square feet of corrugated paperboard will be saved this year in single department as result of application of engineering principles to packaging of fluorescent lamps and fixtures. By reducing height of shipping cartons 6 inches, which makes package easier to handle and store, consumption has been reduced from 29 to 21 square feet per package. Developed by Sylvania Electric Products Inc., Dept. RWS, Ipswich, Mass.

▲ Mention Item NED-5038 when writing ▲

Read Carefully
CHECK AND PASS ON

CHECK	NAME AND TITLE	SEE ITEM NO.

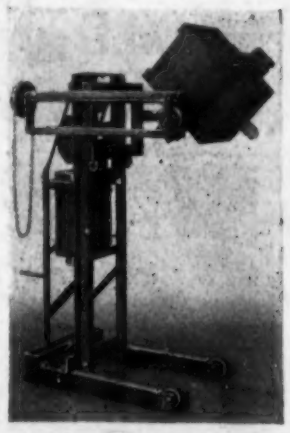
DRILL PRESS FEEDER



Easily and quickly installed on standard hand feed drill presses, Copilot drill press feed regulator permits maximum production with relatively unskilled operators. Hydraulically actuated device prevents violent contact of drill with work at start of operation. It also eliminates dropping of spindle when drill breaks through work. Free action is provided for chip clearance and minimum of attention is required by operator. Metering valve clears itself automatically and it cannot clog. Special models can be engineered for specific operations, if required. List price of standard unit is $60. Made by **Special Devices Co.**, Berlin, Conn.

▲ Mention Item NED-5039 when writing ▲

CARBOY DISPENSER



Pouring of acids from carboy is made safe and easy by use of this carboy dispenser. Unit is wheeled into position straddling carboy on ground. Turning roller in front of carboy tightens clamps through heavy screws until carboy is securely held. Turning crank quickly elevates carboy to desired height. It is then tilted slowly by rotating chain at left driving through worm mechanism. Carboy is held in any desired position until moved again by chain. After emptying, carboy is returned to upright position and gently lowered by brake lever which is same handle as is used for elevating. Made by **Revolvator Co.**, 2032 Eighty-sixth St., North Bergen, N. J.

▲ Mention Item NED-5040 when writing ▲

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with PLASTIC ROCK!

Trowel a smooth, tough, plastic surfacing right over your old concrete or wood floor.

Plastic Rock comes complete, packed in barrels. Nothing more to buy. No application "formula" to confuse you. Simply mix and trowel right over old floor. Average depth one-half inch. Old floor Saturday is a new floor Monday. Also patches concrete to a perfect feather edge. Plastic Rock is absolutely spark-proof, skid-safe wet or dry, dustless, silent. Feels like cork under foot. Cannot splinter, crack, crumble, curl or loosen. Heavy loads on steel wheels actually improve it. Five-year old floors show no wear. Natural color is dark gray. Also furnished in red and brown. Used by U. S. Army, Navy and largest industries in America. Your contractor or your own crew can apply.

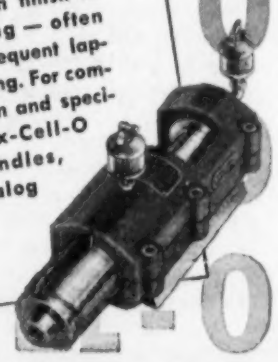
Ask for your copy of Report 220-9

UNITED LABORATORIES, INC.
16804 EUCLID AVENUE · CLEVELAND 12, OHIO
In Canada—STORRAR MFG. COMPANY, Weston, Ontario

▲ Mention Item NED-5041 when writing ▲

EX-CELL-O

Ex-Cell-O Precision Grinding Spindles, fitted with Ex-Cell-O ball bearings specially developed for fast, accurate work, permit high finish in original grinding — often eliminating subsequent lapping and polishing. For complete information and specifications of Ex-Cell-O Precision Spindles, write for Catalog S-537.



EX-CELL-O CORPORATION
DETROIT 6, MICHIGAN

XLO
EX-CELL-O for PRECISION

Precision MACHINE TOOLS · CUTTING TOOLS · AIRCRAFT AND MISCELLANEOUS PARTS

▲ Mention Item NED-5042 when writing ▲

Avoid Hidden Dangers

OF PRESENT AND POST-WAR MATERIALS WITH *Taber* ABRASER

● Expensive mistakes can be eliminated by a Taber Abraser which tests wear quality of surface finishes and fabrics.

The scientific wear action by "Calibrase" wheels is recorded as "wear cycles" that are totalled on built-in cycle counter.

Learn how to guard against complaints and rejections by writing for Bulletin 4012 NOW.

TABER INSTRUMENT CORP.
111 ND GOUNDRY ST., NO. TONAWANDA, N.Y.
Designers and Builders of Precision and Scientific Apparatus

▲ Mention Item NED-5043 when writing ▲

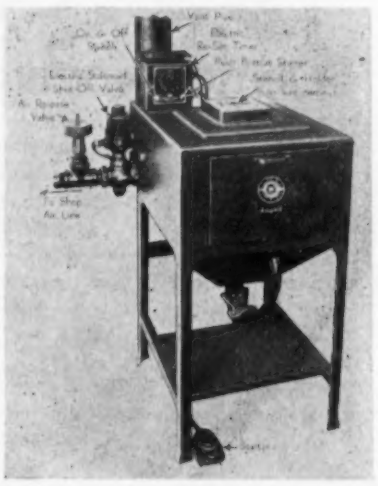
HIGH FREQUENCY SEALER

Thermoplastics are joined together permanently through use of this high frequency heating machine. Current is created between two electrodes in form of rotating wheels or bars. As plastic material passes between these electrodes in electronic field, heat is induced throughout its mass. Pressure may be introduced in any degree to complete weld while materials are in desired plastic state. Electrodes remain at room temperature. Bond formed is water tight, moistureproof and air tight as original material. Fusion in no way injures material.

Process can be used to give decorative effect by joining contrasting colors or textures. It can also be used as means of applying reinforcement to sheets or parts. Basic machine resembles sewing machine in appearance only. Welder, however, can be modified to other forms or it can be incorporated into production machines. Thermoplastic impregnated textiles and papers can be bonded together in this equipment. Made by **Richardson-Allen Corp.**, 15 W. Twentieth St., New York, N. Y.

▲ Mention Item NED-5044 when writing ▲

MARKING UNIT



Marking of delicate and precision parts having ground or mirror surface that must not be marred or distorted is made possible by Airgrit marking unit. Desired marking is accomplished by means of short blast of fine grit material against rubber or celluloid stencil masks upon which part to be marked is placed. Suitable fixtures are made to hold parts so that they can be handled quickly by operator.

Unit is operated by air pressure and is similar to sand blasting unit except that it is constructed for very fine work. It operates most successfully on air at 5 to 8 pounds pressure at nozzle and requires approximately 30 cubic feet of air per minute while in operation. Unit is equipped with electric solenoid valve and timing unit which enables operator to fix length of blast. Masks into which marking is cut can be furnished in celluloid, patented rubber or rubber covered brass. Best results are obtained from use of characters 1/16 inch in size or larger. Made by **Jas. H. Matthews & Co.**, 3947 Forbes St., Pittsburgh 13, Pa.

▲ Mention Item NED-5045 when writing ▲

THIS IS A SYNTRON "Vibra-Flow" DRY FEEDER MACHINE

It is a complete dry-material-handling machine—available in a number of sizes, styles, and capacities—with a vibrated, non-arching hopper—and a "Vibra-Flow" vibrating feeder with rheostat control of material flow.

It can fill a definite place in YOUR material handling processes by controlling the feed of materials to Scales, Dryers, Mixers, Grinders, etc.

It can be manually controlled — or automatically controlled by motor load, scale action, Venturi, electric eye, pH, etc.

The machine illustrated is down in a mine, feeding pebble lime to a conveyor belt carrying fines to tube mills.

Write us about your problem

SYNTRON CO.
405 Lexington
Homer City, Pa.

▲ Mention Item NED-5046 when writing ▲

WHICH IS CHEAPER?

$250.00 Value $25.00 Value

A Critical part ruined by overtightening of one nut — or a quality TORQUE WRENCH which could prevent damage to many parts being assembled.

Torque Wrenches are cheap at any price!

We specialize in torque tools and meters for particular assembly jobs. Our Field Engineers are at your service throughout the United States.

Write on your firm letterhead for a FREE copy of "THE MAN WITH THE WRENCH" and the new complete Torque Table for nuts, bolts, and fittings.

JOYCE & ASSOCIATES
ROOM 818, WASHINGTON BLDG., LOS ANGELES 13, CALIF.

▲ Mention Item NED-5047 when writing ▲

STOP TIME-LOSSES IN MATERIALS HANDLING

WELD-BILT MATERIALS HANDLING EQUIPMENT — in standard types or custom-engineered to your special needs — can add valuable *hours* to production operations in your plant, by saving time now lost in slow handling methods. This is a promise fulfilled in hundreds of busy plants today where handling methods and production lines have been quickened by the wide experience and knowledge of WELD-BILT engineers. May we prove it in *your* plant?

"Weld-Bilt" Hydraulic Lift Truck. Handles heavier loads easier. Exclusive *horizontally-mounted* hydraulic unit. Capacities, 2500 to 10,000 lbs.

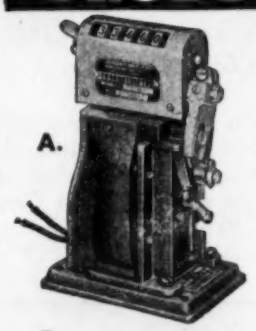
"Weld-Bilt" PRODUCTS

WEST BEND EQUIPMENT CORP.
220 WATER STREET WEST BEND, WISCONSIN
Materials Handling Engineers • Hydraulic Lift Trucks, Two- and Four Wheel Trucks, Tiering Machines, Skid Platforms, Barrel Trucks and Racks, Portable Elevators and Special Equipment.

▲ Mention Item NED-5048 when writing ▲

Wherever there's production to be counted . . . you'll need

PRODUCTIMETERS



A.

WAR times are tuned to "that wh is essential." It is essential exact records be kept on the duction machines of the nation . . . ess tial that those machines be equipped wi Productimeters to record pieces or pa produced, count strokes or revolution measure feet or yards, count cases conveyors. Over 100 standard models choose from . . . designed for speed an accuracy . . . built for hard usage.

B.

In 85% of counting applications, standard unit will meet requirement Write for

Bulletin No. 100

A concise, ready reference catalo of 100 standard models.

C.

A. Electric Unit 5-D-1-MF
B. Stroke Counter 6-H-1-2
C. Conveyor Unit 5-H-5

DURANT MANUFACTURING COMPANY
192 N. Buffum St. • Milwaukee 1, Wi

▲ Mention Item NED-5049 when writing ▲

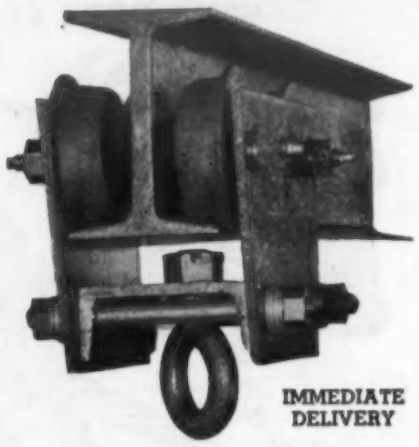
GRAY TROLLEYS

are SAFE and EFFICIENT with CLOSE HEADROOM

•

EQUIPPED WITH GRAY Thoroughly Sealed Ball Bearing Trolley Wheels

•



IMMEDIATE DELIVERY

Long trouble-free service is what you get with every Gray trolley equipped with new type, Gray ball bearing trolley wheels which take maximum radial and thrust loads. Gray trolleys are easily transferred through the shop and can be furnished in 250 lb. to 2 ton standard capacity sizes adjustable to suit various size I-beams. Write for illustrated bulletin describing features of Gray trolleys and trolley wheels.

GRAY HUB COMPANY

Incorporated 1922

17205-17403 GABLE AVENUE DETROIT 12, MICHIGAN

▲ Mention Item NED-5050 when writing ▲

The U. S. Navy uses thousands of stencil cutting machines on ships and shore stations for stencil marking everything from a sailor's clothing to supplies and ammunition.

Your shipments should be stenciled for fast, safe delivery. Cut your stencils on a MARSH. No experience required... saves up to $50 monthly in shipping room time. Also Fountain Brushes, Inks, Stencil Board. Write for booklet and prices. MARSH

MARSH STENCIL MACHINE CO., 23 Marsh Bldg., Belleville, Ill., U.S.A.

PROMPT DELIVERY IN THREE SIZES TO MEET GOVT. SPEC... ½", ¾", 1"

MARSH

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PROTECT MEN, products and machines from abrasives, metal dust and other harmful material with PENFLEX General Utility Flexible All-Metal Hose.

PENFLEX bends easily, follows any desired path. Material flows through smooth, easy bends . . . no sharp turns . . . no clogging. Light in weight, PENFLEX adapts itself to movable parts, bilge ventilation, fume exhaust and conveying of dry granular materials.

For detailed information, send for Bulletin 60. Available up to 18 inches I. D., packed or unpacked.

Photo Courtesy of FIDELITY Machine Company

PENNSYLVANIA FLEXIBLE METALLIC TUBING CO.
7232 Powers Lane, Philadelphia, Pa.

ESTABLISHED 1902

▲ Mention Item NED-5052 when writing ▲

SMALL ELECTRIC MOTOR

Suitable for power requirements of 1/125 up to 1/25 horsepower, type T Micromotor is shaded-pole totally-enclosed motor. Quiet operation is assured by resilient, rubber mounting consisting of two rubber pads, two spring steel lock rings and base welded into single rigid unit. All rotor slots are copper filled flush with circumference with preformed copper inductors, fuse welded permanently into position for maximum electrical conductivity in circuit. Modifications for different performance characteristics can be met by change of inductor resistance. Special voltages, frequencies, leads, finishes and shaft extensions are available. Made by A. G. Redmond Co., Owosso, Mich.

▲ Mention Item NED-5053 when writing ▲

METAL MOLDING FILM

Offered for showings by engineering societies, trade groups and for industrial training purposes, 16-millimeter film is entitled, "The Flow of Metal into Molds." This silent motion picture in full color shows action of molten metal as it is poured into molds of various sizes, shapes and complexities. Prints will be loaned upon written request. Offered by Meehanite Research Institute of America, Inc., Pershing Square Bldg., New Rochelle, N. Y.

▲ Mention Item NED-5054 when writing ▲

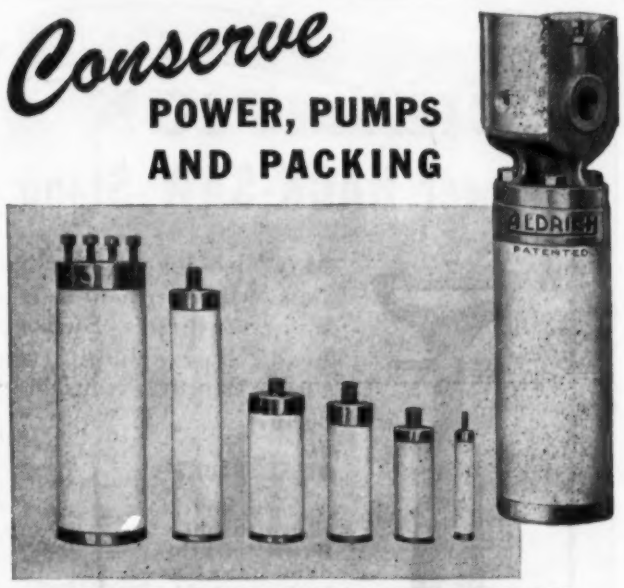
BARREL PLATING UNIT

Although originally designed for plating of precious metal, Barel-Cel 2-gallon plating unit is being used satisfactorily for copper, nickel, brass and silver plating. It is particularly suited to plating of such small pieces as springs, catches, rings, ear wires, pins and screws. There is no waste of materials such as occurs in basket method of plating.

Unit consists of adjustable cathode and anode, and tilted tub which rotates slowly during plating operation. Power unit electric motor can be plugged into convenient outlet. Plating current supply to unit is furnished by means of two wire leads that are fastened to plating current bars. Tub is removable to permit flexibility in handling solution, such as raising to proper temperature, before plating. Made by Precimet Laboratories, 64 Fulton, New York 7, N. Y.

▲ Mention Item NED-5055 when writing ▲

Conserve POWER, PUMPS AND PACKING



. . . WITH ALDRICH "KOSMOS" PORCELAIN PLUNGERS!

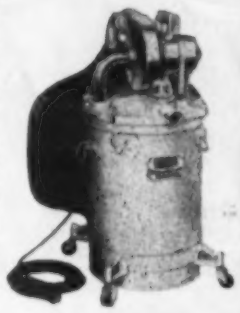
Applicable to Aldrich or any other make of reciprocating pump. Will withstand action of corrosive and abrasive liquids at temperatures up to 150° F. Widely used in salt water disposal, water flooding, crude oil and chemical services. *Send for Data Sheet 57-2.*

THE ALDRICH PUMP COMPANY
4 GORDON STREET • ALLENTOWN • PENNA.

▲ Mention Item NED-5056 when writing ▲

Increase Machine Life with

IDEAL "Tank-Type" ELECTRIC CLEANER



Many industrial plants make their equipment last longer and operate better through regular use of Ideal Electric Cleaners. The Ideal "Tank-Type" Cleaner picks up trouble-making metal chips, grindings and abrasive materials and traps them in 12-gal. tank. Super-powered; full 1 H. P. Motor. Portable.

POWER UNIT IS DETACHABLE

Available as a separate "hand" unit for Blowing and Vacuuming dirt from machinery and electrical equipment, etc.

Write for Detailed Literature

IDEAL *Sycamore*

IDEAL COMMUTATOR DRESSER CO.
1032 Park Ave. Sycamore, Ill.

Sales Offices in all Principal Cities.
In Canada: Irving Smith Ltd., Montreal, Quebec.

▲ Mention Item NED-5057 when writing ▲

HIGH SPEED *Automatic* MACHINING *of* TUBES AND RODS

SERIES 400 Full Automatic Double Spindle PINES PROFILER with chute feed. Drills both ends 1¼" diam. steel rods at same time.

PINES PROFILERS

BURR • BORE • CENTER • FACE • THREAD
TURN • DRILL • CHAMFER • REAM
Both Ends Simultaneously!

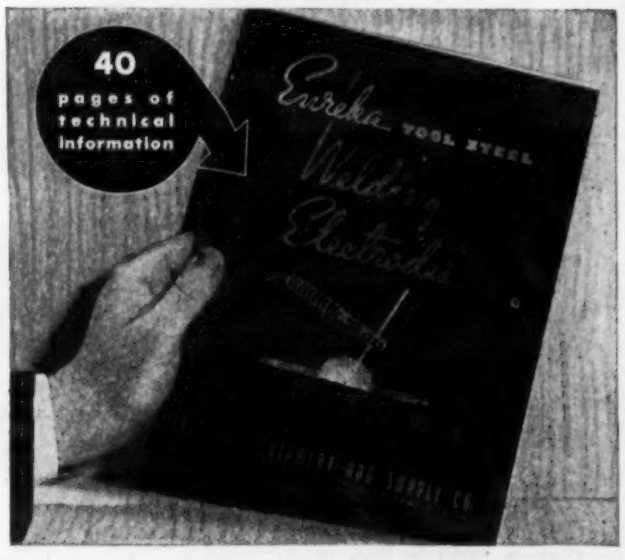
Save Skilled Labor . . . Boost Production
Cut Operation and Production Costs

Phone, Wire or Write for Further Information

PINES ENGINEERING CO., INC.
640 PRAIRIE • AURORA, ILLINOIS

SPECIALISTS IN TUBE FABRICATING EQUIPMENT

▲ Mention Item NED-5058 when writing ▲



YOU SHOULD HAVE THIS

. . it tells all about TOOL STEEL welding

★ This manual will help you save man-hours, conserve material and minimize production delays by outlining methods of repairing and compositely fabricating tools and dies, as well as correcting design and rectifying errors. Send for your copy today. It is fully illustrated with typical welding applications.

Distributors in Principal Cities of the United States and Canada

WELDING EQUIPMENT & SUPPLY CO.
223 LEIB STREET • DETROIT, MICHIGAN

▲ Mention Item NED-5059 when writing ▲

▲ Mention Item NED-5060 when writing ▲

BRINGING handling methods up to peak efficiency has been a tremendous factor in Americ. war-time production miracle. Post-war competition will demand the same degree of efficiency.

Logan can assist you in your post-war materials handling problems. Orders for post-war conveyor systems will be filled — in order — as fast as peace production is resumed. May we send you free literature?

The Logan Co., Inc., 215 Cabel St., Louisville, Ky.

Logan Conveyors

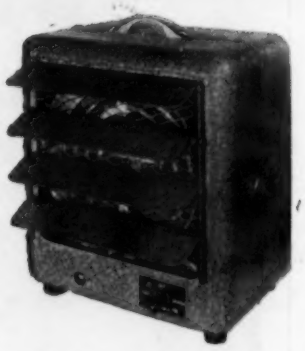
PUT FLOW INTO PRODUCTION

▲ Mention Item NED-5061 when writing ▲

Get set for cold weather with ELECTRIC HEAT

Meet variable fall weather with the kind of heat you can turn on or off with the snap of a switch.

CHROMALOX
ELECTRIC
UNIT HEATERS



enable you to postpone expensive steam plant operation during fall.

Eliminate wastefully firing up a ponderous steam system for a few hours of use.

Provide heat when it's needed—no waiting on steam plant.

When heat is not needed, these units stop—no expense.

Don't take chances with the health of workers by overheating or underheating.

Use flexible, closely controlled Chromalox electric industrial air heaters, and keep shop temperatures RIGHT.

The Type HF unit heater, in four sizes—1.5 to 4-kw. Other types up to 40-kw., for heating large areas. Chromalox unit heaters can be supplied with thermostatic control if desired. Available on proper priority.

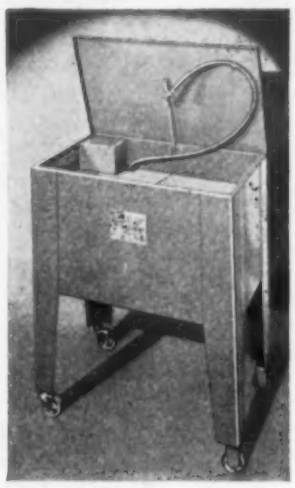
Always ready, on off-peak periods, Sundays, holidays, when steam plant is shut down.

Write for Chromalox Catalog

EDWIN L. WIEGAND COMPANY
7509 Thomas Blvd. Pittsburgh 8, Pa.

▲ Mention Item NED-5062 when writing ▲

METAL PARTS CLEANER

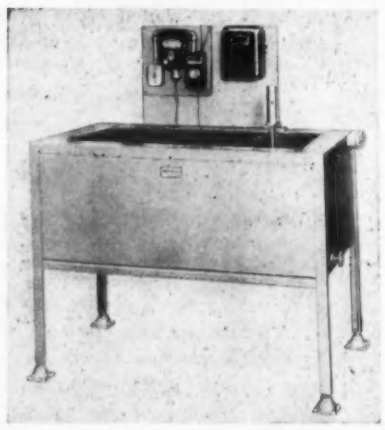


Combining utility of two parts washers into single self-contained portable unit, Model P70 and P60 parts cleaning systems include agitation and use of cold-cleaning Flo-Bac solvent. Large parts are cleaned of grease and grime by strong stream of solvent pumped from tank below through flexible hose and controlled nozzle. Smaller parts may be washed in quantity by placing them in basket and immersing in solvent tank. Two-section shelf may be removed to provide access to dipping tank. Dipping basket rests on hand operated agitating device which speeds cleaning operation.

Parts such as castings, gears, bearings, carburetors, air cleaners, machine products and tools are quickly washed. Cleaning machine is fully portable and equipped with built-in gear type pump. Safety cover eliminates fire hazards. Cold solvent degreases parts without heating or corroding. Since it is filtered continually, solvent may be used repeatedly. Made by Gray-Mills Co., 1948 Ridge Ave., Evanston, Ill.

▲ Mention Item NED-5063 when writing ▲

WAX DIPPING BATH



Providing fast, efficient and economical method of applying wax coatings to coils, resistors, condensers, panels and electrical parts, this automatically controlled wax dipping bath can also be used to wax coat wrapped packages for moisture proofing. Tank is electrically heated by low density type strap-on heating elements. Adjustable thermostats fitted with dial thermometer control bath temperature which may be adjusted from 100 to 550 degrees Fahr. Unit is of rigid welded steel plate construction. Fiberglass insulation, 2 inches thick, contributes to economy of operation. Baths can be built to suit customers' requirements and trays, baskets or racks to hold work can be supplied. Made by The Barnstead Still & Sterilizer Co., 38 Lanesville Terrace, Forest Hills, Boston, Mass.

▲ Mention Item NED-5064 when writing ▲

DO YOU KNOW?

Use of transparent shades in war plants is claimed to have increased production greatly by cutting out glare, strong sunlight and heat. Accident curved dropped sharply in one plant after shades were installed. Made by Transparent Shade Co., Los Angeles, Calif.

▲ Mention Item NED-5065 when writing ▲

▲ Mention Item NED-5066 when writing ▲

SAFE-LINE
WIRE ROPE CLAMPS

Write for details of this—the only PERFECTED wire rope clamp on the market. Millions used by manufacturers, the armed forces and industries.

NATIONAL PRODUCTION COMPANY
4557 ST. JEAN AVENUE DETROIT 13, MICHIGAN

▲ Mention Item NED-5067 when writing ▲

ARMSTRONG Low Cost, Efficient Steam Type HUMIDIFIERS . . .

WRITE FOR NEW BULLETIN NO. 158

. . . A valuable discussion on humidification

WHEN you install Armstrong Unit Humidifiers you don't have to disrupt plant routine to make complicated hook-ups. Just connect them into existing steam lines with a minimum amount of critical materials.

Armstrong Humidifiers are low in initial cost and operating expense, too. Units capable of handling 40,000 cu. ft. of space or more list at only $100.00 complete, with sensitive Friez humidistat and all accessories. The steam they use is available in most plants for less than $1.00 per ton. *Ask for literature!*

ARMSTRONG MACHINE WORKS
819 MAPLE ST. THREE RIVERS, MICH.

BUILT BY THE MAKERS OF ARMSTRONG STEAM TRAPS

▲ Mention Item NED-5068 when writing ▲

▲ Mention Item NED-5069 when writing ▲

For Close Joints in
SILVER ALLOY BRAZING

SCAIFLUX

• A ternary eutectic Flux • Non-corrosve; alkaline • Active at 900° F. to 1650° F. • Low Surface tension • Adhesive Liquid • No gas phase • Water Soluble

Fine joining of close-tolerance parts becomes routine accomplishment with SCAIFLUX! This modern flux paste becomes an *adhesive liquid* at 160 F.—*stays put* when brushed on metal surfaces—*flows readily* at low surface tension—has every characteristic required for consistent, quality brazing on today's exacting jobs. Write for Bulletin 316.

SCAIFE COMPANY
FOUNDED 1802
General Offices and Works: OAKMONT (Pgh. District), PA.
Representatives in Principal Cities

▲ Mention Item NED-5070 when writing ▲

SAFE

DAYTON SAFETY LADDERS
have every advantage

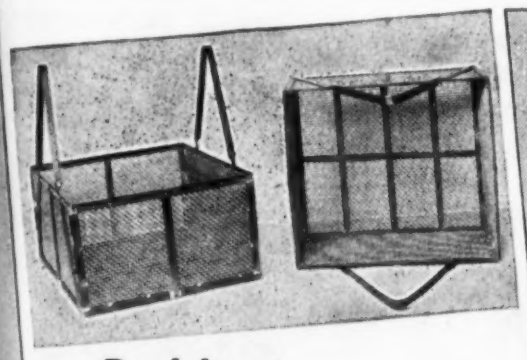
No extra man needed to steady — Roomy platform for men and tools—Great strength, yet lightweight. Guard rails on platform. Automatic locking. Folds compactly.

Airplane spruce used throughout — Steel braces—Safety shoes. In sizes 3′ to 16′ in height — Elevating platform adds height.

Write today for Free Catalog—Prices.

DAYTON SAFETY LADDER Co.
121-22 W. 3rd ST. CINCINNATI, OHIO

▲ Mention Item NED-5071 when writing ▲



Pickling
BASKETS
BUCKETS, VATS and CRATES

Made of Monel, Inconel, Copper, Steel and other metals, to suit your individual needs.
Send us details of your requirements. Our engineers will suggest the metal most suitable and design equipment that will help increase operating efficiency.

The KIRK & BLUM MFG. CO.
2813 SPRING GROVE AVE. CINCINNATI, OHIO

KIRK AND BLUM

▲ Mention Item NED-5072 when writing ▲

TAPPING ATTACHMENT

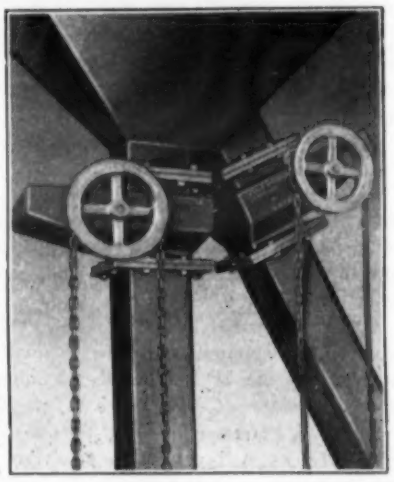
Providing automatic cycle and controlled positive lead, this precision tapping attachment may be installed without alteration in standard 17-inch Delta drill press. Unskilled operators can consistently produce Class 3 or better threads, it is claimed.

Lead screw is hardened and ground, has large bearing surface, is fully protected against dirt and chips and is adequately lubricated. Large diameter screw is mounted as closely as possible to chuck to eliminate any errors in lead which may be introduced by torque or wind-up effect of spindle under heavy load. Lead screws and meeting nuts are available in pitches from 11 to 72 threads per inch.

In operation, adjustable threaded set collar is set to predetermined depth. When pressure is applied to foot pedal, spindle revolves and tap is fed into work. As long as foot pedal is held down, tap continues to enter work until it reaches predetermined depth. It will then reverse automatically, back out and stop. Tap may be reversed at will of operator before reaching predetermined depth by releasing pressure on foot pedal. Made by **Douglas Machinery Co.**, 150 Broadway, New York 7, N. Y.

▲ Mention Item NED-5073 when writing ▲

BULK MATERIAL VALVE



Suitable for bin, conveyor or spout outlet applications where material handled is not too coarse to flow through it or too fine so as to cause leakage, bulk material valve is available in 6, 8, 10 and 12-inch sizes and with either square or round top and bottom flanges. Gate of ¼-inch steel plate is fitted with two welded steel racks driven by pinions on chain or handwheel operated shaft. Adjustable slide bars enable user to adjust valve clearance and compensate for wear. Pocket sheave for chain operation or handwheel may be mounted on either side. Style OBC is for installation with vertical axis and style 2BC for inclined axis installation. Made by **Stock Engineering Co.**, 715 Hanna Bldg., Cleveland 15, O.

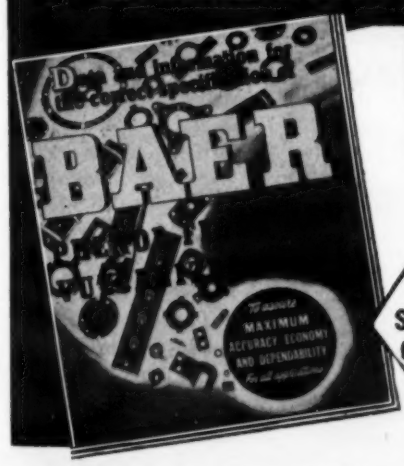
▲ Mention Item NED-5074 when writing ▲

DO YOU KNOW?

More than 6 pounds lighter in weight than other units of same capacity, SF9LD-1 aircraft magneto will operate satisfactorily at high pressures and high altitudes encountered in this service. Magneto is of rotating magnet type and produces in excess of 16,000 volts when required. Made by Edison-Splitdorf Div., Thomas A. Edison, Inc., West Orange, N. J.

▲ Mention Item NED-5075 when writing ▲

FIBRE FABRICATION DATA BOOKLET



FREE!
ON REQUEST.

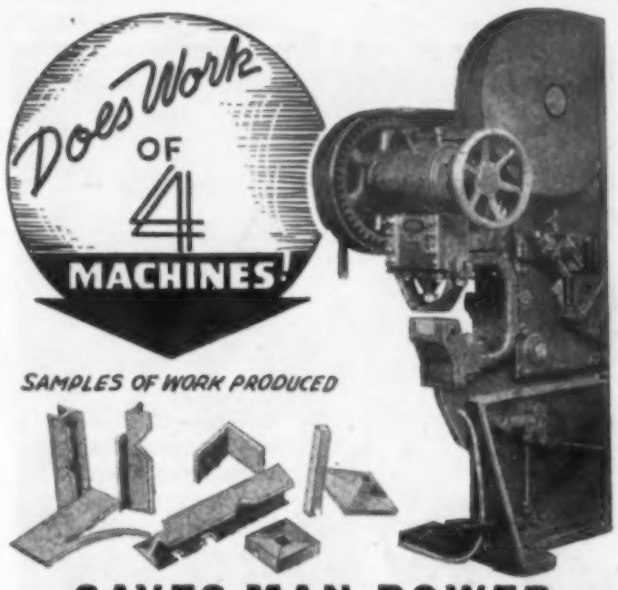
DATA AND INFORMATION FOR THE CORRECT SPECIFICATION OF PHENOL FIBRE & VULCANIZED FIBRE

Just off the press—the new BAER descriptive bulletin! Contains factual, concise, vitally-pertinent data for the fibre-fabrication specifier or purchaser. What to use and what not to use for your particular application, from the standpoint of functional efficiency, service dependability and production economy.

Illustrated with tables and charts for quick reference. Write for your copy now—a note will bring it promptly.

N. S. BAER COMPANY
CRAFTSMEN IN FIBRE FABRICATION
9-11 S. MONTGOMERY ST., HILLSIDE, N. J.

▲ Mention Item NED-5076 when writing ▲



SAMPLES OF WORK PRODUCED

SAVES MAN-POWER

Meets today's demand for saving man-power, time, space, and eliminates waste. Performs four operations (1) punches; (2) shears plates and bars; (3) miters and notches; (4) does angle and tee cutting. Nothing like it. Speeds production. Increases efficiency. Economical to operate. Does work of 4 machines. Unskilled labor can operate it. Easily moved. Superior workmanship. Made of finest materials. Fully guaranteed. Ready for use at all times.

Write for Bulletin 11, 221 for full details, description, and prices. No obligation.

KLING BROS. ENGINEERING WORKS
1318-G No. Kostner Ave. Chicago 51, Illinois

KLING'S COMBINATION SHEAR · PUNCH & COPER

▲ Mention Item NED-5077 when writing ▲

Easier, More-Exact
pH REGULATION

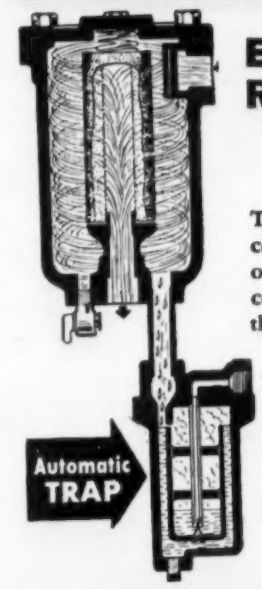
For any process requiring close regulation of acidity or alkalinity, Foxboro pH Recorders offer exceptional ease and accuracy in finding and holding the correct pH point. A perfect combination of standard Foxboro Potentiometer Recorders and Foxboro Beckman Amplifiers and electrodes furnishes continuous, exact records of pH. The glass-electrode method eliminates need for color-matching. Supplied with flow-type or immersion-type electrodes. Foxboro pH Recording Controllers also available for many uses.

The Foxboro Company, 134 Neponset Ave., Foxboro, Mass., U. S. A. Branches in principal cities.

FOXBORO pH RECORDERS
Reg. U. S. Pat. Off.

▲ Mention Item NED-5078 when writing ▲

Poro-Stone Filtration
FOR COMPRESSED AIR



EFFICIENTLY REMOVES:
OIL, WATER
PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 104.

R. P. ADAMS CO., INC.
63 Chicago St. • Buffalo, N. Y.

ADAMS *Poro-Stone* AIR FILTER

▲ Mention Item NED-5079 when writing ▲

CLIMAX FURNISHES AUTHORITATIVE ENGINEERING DATA ON MOLYBDENUM APPLICATIONS. MOLYBDIC OXIDE, BRIQUETTED OR CANNED • FERROMOLYBDENUM • "CALCIUM MOLYBDATE"

Climax Molybdenum Company
500 Fifth Avenue New York City

▲ Mention Item NED-5080 when writing ▲

Time-cramped plants all over the country are adopting this efficient, positive-action switch—for greater production—for added safety. Leaves both hands free for work. A must for machines that are switched on and off frequently. MOMENTARY OR MAINTAINED CONTACTS IN ALL MODELS. Rated at 20 Amps—125-250 volts, A.C.-D.C. 10 Amps—440-475 volts, A.C., up to 2 H. P. Double-pole and three-pole mechanism. 3-Phase Models rated up to 2 H. P. 575 Volts, A.C.

We Welcome Specifications on Special Requirements. Write Today for Bulletin.

SIMONDS MACHINE COMPANY, INC.
33 VIKING TERRACE SOUTHBRIDGE, MASS.
MANUFACTURER'S AGENTS—SOME TERRITORIES OPEN

▲ Mention Item NED-5081 when writing ▲

Announcing the New
MASONEILAN DISPLACEMENT-TYPE
LEVEL CONTROLLER

Result of years of engineering development, this New Masoneilan 12,000 Series Controller combines refinements never before found in this type of Controller. Models are available for controlling levels of all liquids of all usual specific gravities at usual pressures and temperatures, for interface service, specific gravity control and remote level indication.

FEATURES

MOUNTINGS
Available with screwed or flanged top and bottom connections; side cylinder flanged connections; top of vessel flanged connections; or side of vessel flanged connections. Controller Case mounting may be right hand or left hand and may be reversed in the field without replacement or addition of parts.

RANGES
14 and 32 inches 4, 5, 6, 8, 10 and 15 feet.

TORQUE TUBE ASSEMBLY
Torque tube and all parts made of Inconel. Rotation limit stops are provided to protect the torque tube.

CONTROLLER CASE
Sturdy and scientifically ribbed to prevent any possibility of distortion.

CONTROL MECHANISM
A new principle: sensitive to .001 of an inch change in level. Proportional mechanism is a unit assembly mounted in the controller case. Large capacity pilot.

ADJUSTMENTS
Proportional band of 1 to 100% easily adjustable over 4 inch graduated scale. Proportional band is linear to close tolerances in all settings.
Specific gravity scale adjustable from .5 to 1.2 or from .8 to 2.0.

MASONEILAN
MASON-NEILAN REGULATOR CO.
1205 ADAMS ST., BOSTON 24, MASS.
New York Philadelphia Pittsburgh Tulsa Toledo Chicago
St. Louis Houston Atlanta Los Angeles San Francisco
Mason Regulator Co. of Canada, Ltd., Montreal, Canada

▲ Mention Item NED-5082 when writing ▲

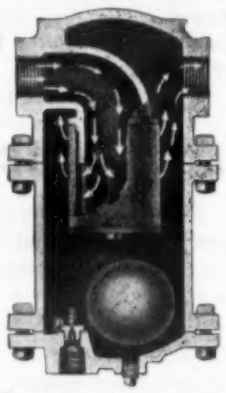
POLISHING WHEEL BUSHINGS

Quick and easy changing of wheels without wear to spindle and without risk to operator are advantages claimed for Presto polishing wheel bushings. Wheel is kept concentric regardless of how often it is removed, thus assuring uniform contact on work. Bushings are easily pressed into wheel, using polishing lathe spindle. Notches hold bushings in wheel and prevent turning. They are available for all spindle diameters. Made by **The Manderscheid Co.**, 605 W. Washington Blvd., Chicago 6, Ill.

▲ Mention Item NED-5083 when writing ▲

COMPRESSED AIR SEPARATOR

Of self-draining type, this type SA compressed air separator eliminates need for external traps or for manual draining. Trap mechanism automatically releases all water, oil and other moisture that has been removed from compressed air. It employs principles of expansion and change of direction to remove 99 per cent of oil, water and dirt from compressed air.



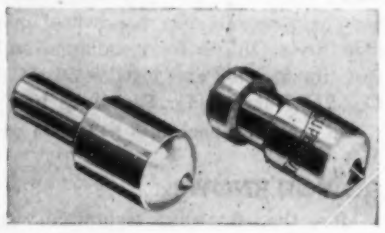
Entering air is allowed to expand slightly to precipitate most of the entrained moisture. Air then passes through labyrinth of coarse wire mesh which changes direction of flow many times so as to surrender remaining particles of foreign matter.

Trap mechanism consists of spherical float and chrome steel valve and seat. This assembly is mounted in bottom plate of separator body and can be quickly and easily removed for inspection or cleaning. When level of accumulated liquid and dirt is sufficient to raise float, valve opens and liquid flows out drain.

Available capacities are 80 and 160 cubic feet of free air per minute at 90 pounds pressure. Smaller size has inlets of ¾, 1 or 1¼ inches and larger has inlets of 1½ or 2 inches. Made by **Johnson Corp.**, Three Rivers, Mich.

▲ Mention Item NED-5084 when writing ▲

DIAMOND TOOLS



Twenty-two Super-Cut tools are available in variety of types to fit all standard grinding machines and individual uses. Types include tools for wheel dresser, gear grinders, thread grinders, radius and form dressing, boring tools, gage points, chisel edges, and multiple set and cluster type dressers. Each diamond is selected for specified use and is set by Super-Lock process. Made by **Industrial Abrasives, Inc.**, 3724 W. Thirty-eighth St., Chicago 32, Ill.

▲ Mention Item NED-5085 when writing ▲

More Comfortable More Efficient
Hand Protection

Light STANZOILS with non-slip finish that really won't slip

They're light weight, comfortable, unusually sensitive at the finger-tips —ideal for light assembly or inspection work. Made of neoprene, they resist damage by oils, acids, give better hand protection, last longer, cost less. Revolutionary non-slip finish assures firm easy grip of slippery pieces—faster, more accurate work. Please your workers and avoid costly liability claims with these Stanzoil RSW-13's. Write for the whole story—now.

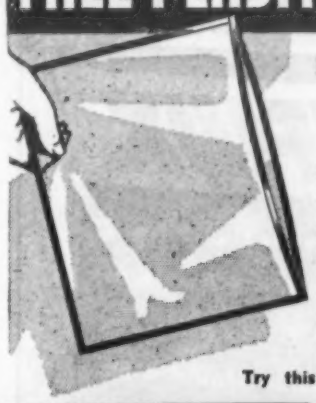
STANZOIL PIONEER

Synthetic Rubber Division
THE PIONEER RUBBER COMPANY
248 Tiffin Rd., Willard, Ohio, U.S.A.
New York • Los Angeles

MADE WITH DU PONT NEOPRENE

▲ Mention Item NED-5086 when writing ▲

FREE PLASTIC ENVELOPE



Factory Experience Proves It Reduces Errors . . . Saves Work Speeds Up Production

Send for this free Kleer-Vu Plastic Envelope today and test it in your own plant. See how production records, job orders, blueprints, charts, graphs, etc., stay clear and clean always. No doubts, no errors, no wasted time because of blurred, grease-covered figures. No "make-overs" on vital war jobs. Work gets done quickly, efficiently. Ideal for much handled office forms, too. You can use Kleer-Vu Plastic Envelopes profitably in every phase of business.

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Kleer-Vu Plastic Envelopes come in many standard styles, or are made to order in any size, any gauge.

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***Kleer-Vu* PLASTIC ENVELOPES**
reduce errors . . . save labor . . . speed work

▲ Mention Item NED-5087 when writing ▲

"SIAMESE TWIN"
WASH, RINSE AND DRY UNITS
Save Floor Space!

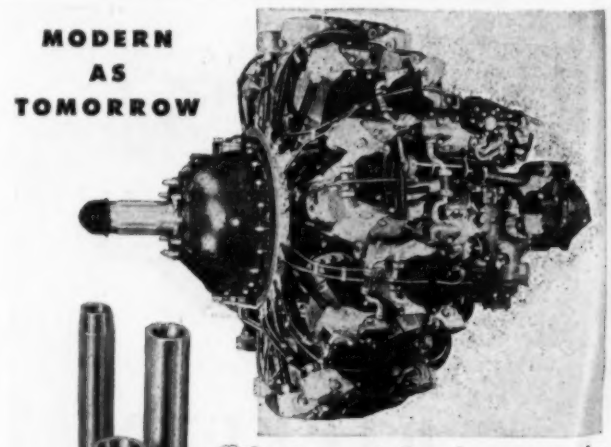
NOT A STUNT OR FREAK,
these two complete A-F wash, rinse and dry units were designed in one housing to save floor space. With overhead trolley conveyor in one unit, it washes metal parts in a vertical position, and with a wire mesh conveyor in the other, it washes metal parts in a horizontal position.

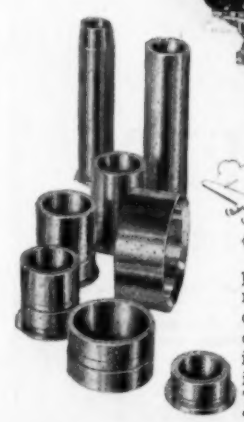
While each washing operation can be performed separately, or both at the same time, the two machines are shielded from each other so that cleaning in one does not affect the other. A great economy is provided by both machines drawing their solution from the same tank. Only one tank must be heated. For full descriptive literature of this and other A-F Metal Products Cleaning and Finishing Equipment, write today to The Alvey-Ferguson Company, 38 Disney St., Cincinnati 9, Ohio. Offices in Principal Cities.

CONVEYING EQUIPMENT
Alvey-Ferguson
METAL PRODUCTS CLEANING & FINISHING EQUIPMENT

▲ Mention Item NED-5088 when writing ▲

MODERN AS TOMORROW

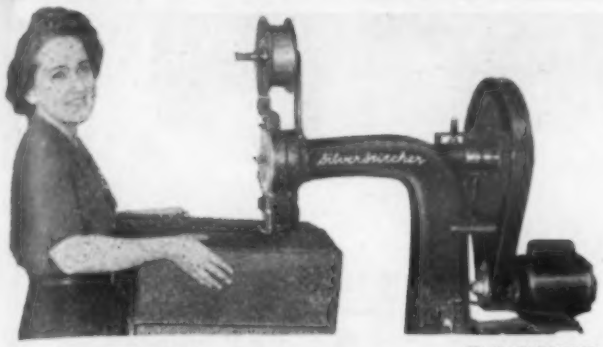




● Sound reasons why sleeve bearings predominate in this famous Pratt & Whitney aircraft engine. Bunting Bearings play an important part in this as in many other machines. Readily available from stocks of leading wholesalers are Bunting Bronze Standardized Bearings and Bunting Factory-finished Bearing Bronze Bars. Write for catalog. The Bunting Brass & Bronze Company, Toledo 9, Ohio. Warehouses in Principal Cities.

Bunting
BRONZE BUSHINGS ☆ BEARINGS ☆ PRECISION BRONZE BARS

▲ Mention Item NED-5089 when writing ▲



"Here's the answer to... FASTER, EASIER CARTON STITCHING"

"Savings in labor—reduced costs—increased output"—these are advantages that users of Silverstitchers report—results you need and can have in your business with Silverstitchers.

EXCLUSIVE FEATURES YOU WANT—Single pedal control—fewer moving parts—made for quiet trouble-free operation—long wear and simple operation—that's the Silverstitch story.

FREE BOOKLET GIVES FACTS—get the latest and most complete facts about Silverstitchers. Write today.

ACME SilverStitcher

ACME STEEL COMPANY
2822 ARCHER AVENUE, CHICAGO 8, ILLINOIS

▲ Mention Item NED-5090 when writing ▲

The Day You Stop War Production . . .

how ready will you be to begin peace-time production?

Is your post-war production line being planned now? If you expect to employ heated compounds, melted solder, wax, marine glue, Koroseal or thermo-plastic resins, then you can use specific information about Sta-Warm electric heating tanks, kettles and pots.

You may prefer the help of Sta-Warm engineering service in planning the most efficient way to melt, store, pour, convey or dispense heated materials. It's yours for the asking.

We suggest, however, that you not wait until the day you stop war production to get up-to-date on Sta-Warm heating equipment. Write for our new illustrated product bulletin today?

STA-WARM ELECTRIC CO.
130 N. CHESTNUT ST. • RAVENNA, OHIO

▲ Mention Item NED-5091 when writing ▲

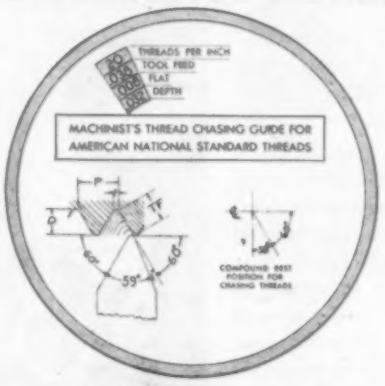
AMERICAN Phillips SCREWS

1. *Stop Waste of Time:* Avoid fumbling, dropping and wobbly starts. Recessed screwhead fits firmly onto 4-winged bit. Power drivers can be used, saving up to 50% of assembly time. 2. *Stop Rejections:* Screw can't be driven crooked. Driver can't slip out to gouge the work surface. 3. *Stop Scrapping of Screws:* American Phillips Recessed Head can't be burred or broken like slotted screws. And American's individual inspection protects you against defective heads, threads, or points.

AMERICAN SCREW COMPANY
PROVIDENCE 1, RHODE ISLAND
Chicago 11: 589 E. Illinois Street • Detroit 2: 502 Stephenson Building

▲ Mention Item NED-5092 when writing ▲

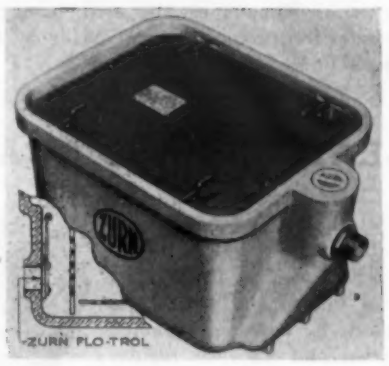
THREAD CUTTING GUIDE



Developed as quick reference chart for engine lathe thread cutting operations, this Machinist's thread chasing guide is easy to use. Dial chart presents handy data and set-up diagrams. Guide is easily set for cutting any thread from 4 to 72 threads per minute. Reverse side of chart selects National Coarse or National Fine machine screw and shows threads per inch, tap drill size and body drill size. List price is 25 cents. Made by **Burton Hazelton Specialties**, 312 E. Bodley, Kirkwood 22, Mo.

▲ Mention Item NED-5093 when writing ▲

GREASE INTERCEPTOR

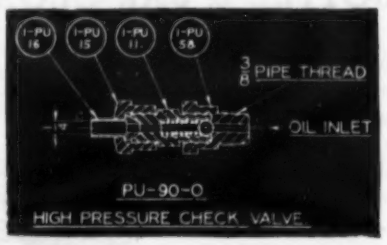


Grease which would normally foul interior drainage lines is intercepted, separated and recovered from waste water by this improved Greaseptor which now incorporates flow control. This Flo-Trol automatically prevents passage of waste water into unit in excess of rated capacity. Device can be adjusted automatically by plumbing contractor or plant installation crew for rated flow.

There are no maintenance or replacement parts. Fitted gate provides optimum flow rate. Unit can be flush cleaned by operating control handle. Cover cannot be replaced without control unit being in operating position. Expanding walls insure free flushing of trapped solids. There is no waste spillage during cleaning period. Made by **The J. A. Zurn Mfg. Co.**, Erie, Pa.

▲ Mention Item NED-5094 when writing ▲

HYDRAULIC FITTINGS

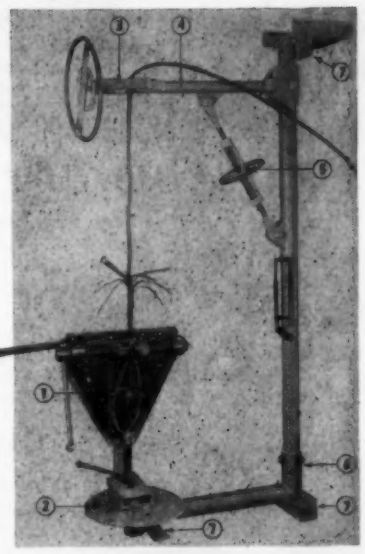


Cut from solid steel bar stock and designed for hydraulic working pressure of 3000 pounds per square inch, line of hydraulic fittings includes illustrated No. PU-90-0 high pressure check valves. This unit is reversible by placing steel ball ahead of spring and changing oil inlet accordingly. Included in line are spring loaded and adjustable safety valve for protection against excess pressure; straight connection; tee and elbow assemblies; and ⅜ and ½-inch four-way valves. Made by **Anker-Holth Mfg. Co.**, Port Huron, Mich.

▲ Mention Item NED-5095 when writing ▲

GAR-BRO Splicing Rig

Easily *Portable*, Self-contained



The Gar-Bro Cable Splicing Rig takes care of all the necessary operations in the splicing of a cable. Any standard splicing vise (1) can be attached to the revolving stand (2), permitting the twisting of the cable by revolving the splicing vise. An overhead quick opening type gripping vise (3) is provided, mounted on a pivoted tension arm (4) with tension adjustment wheel (5). This Splicing Rig replaces overhead chain block, grip chains and twisting bar, as commonly used, and is much faster and easier to operate. The Gar-Bro Cable Splicing Rig can be set up, lashed to a tree or post, and be working in 10 minutes. On shipboard, it may be mounted on benches for horizontal splicing. Overall size, 96"x45". Weight, without vise, 250 lbs., approx. Top and bottom members are readily detached. No section of the unit weighs over 100 lbs. Write for Bulletin No. 73.

GAR-BRO GARLINGHOUSE BROTHERS MANUFACTURERS
2416 E. 16th St. • Los Angeles 21, California

▲ Mention Item NED-5096 when writing ▲

SAVE SET-UP TIME with GORTON MACHINE VISES

PLAIN . . . FLANGED . . . OR FLANGED SWIVEL

5 MODELS—for fixed or swivel holding of a wide range of work.

IMMEDIATE DELIVERY—ORDER TODAY

Rugged—Jaws faced with *removable hardened and ground* steel plates. Pay for themselves many times saving cost of special fixtures.

Plain Vise—283-1—Removable V-block. Complete with T-Slot Nuts and Studs.

Flanged Vise—Two models—5F and 7F. Complete with handle.

Flanged Swivel Vise—Two models—5FS and 7FS—With swivel base for milling any angle in horizontal plane.

SPECIFICATIONS

Model	Max. Jaw Opening	Width	Depth
283-1	3 1/8"	2 3/4"	1 7/8"
5F or 5FS	3"	5 5/16"	1 7/16"
7F or 7FS	4 1/4"	7 1/4"	1 3/4"

Write today for FREE Accessories Catalog describing many other Gorton Time-Saving Accessories. FREE

GEORGE GORTON MACHINE CO.
1109 13TH STREET, RACINE, WISCONSIN, U. S. A.

▲ Mention Item NED-5097 when writing ▲

THERE'S A NEED FOR THE CM COMET IN EVERY MANUFACTURING PLANT

5 Capacities from ⅛ ton to 1 ton. Priced from $130.

For the fast and economical overhead handling of materials in process of manufacture or assembly, the light weight CM Comet Electric Hoist offers some outstanding features. All working parts are fully enclosed and permanently lubricated... operates on 220 or 440 volt power line or 110 volt lighting circuit... low headroom... one hand control... overload tested... safety guards ... heavy duty motor and controller... Herc-Alloy double duty chain. Get *all* the details of *all* the advantages by writing today for Bulletin No. 138.

CHISHOLM-MOORE HOIST CORP.
Affiliated with Columbus-McKinnon Chain Corp.
General Offices and Factories: 114 Fremont Avenue, Tonawanda, N. Y.
Sales Offices: New York, Chicago and Cleveland

▲ Mention Item NED-5098 when writing ▲

TWIN PRECISION

"NORMA-HOFFMANN"
BALL & ROLLER BEARINGS
for any
LOAD-SPEED *or* DUTY

ASK FOR CATALOG AND ENGINEERING COUNSEL

NORMA-HOFFMANN BEARINGS CORPORATION STAMFORD CONN. U.S.A.

▲ Mention Item NED-5099 when writing ▲

. . . and why take chances with dust or fume hazards either! Do as thousands do, wear a . . .

DUPOR No. 24 Respirator

U. S. Bureau of Mines approved for Type "A" Dusts. Has 24 sq. in. filtration area. Provides ample protection against silicosis and pneumoconiosis producing dusts. Sample sent $2.50 postpaid.

Complete Catalog Sent on Request

GOLDEN JUBILEE 1894 1944 H. S. COVER

105 Chippewa Street South Bend, Indiana

▲ Mention Item NED-5100 when writing ▲

You can use this improved Romec Pump if . . .

Its balanced type relief valve with shaft seals are dependable through extreme ranges of temperature. A precision built pump noted for its unfailing dependability, but only one of many in the ROMEC line. Tell us about your requirements.

ROMEC PUMP COMPANY, 112 Abbey Road, Elyria, Ohio, U. S. A.

▲ Mention Item NED-5101 when writing ▲

GET THIS LABOR SAVER

DRUMS, BARRELS with loads up to 800 lbs. EASILY HANDLED by ONE MAN

Type L-3 SABIN One-Man TRUCK $33.50

With this amazing truck, one man without helpers, can easily pick up and transfer up to 800 lb. drum or barrel loads. Exclusive Third-Wheel Feature is an outstanding advantage you should investigate. Write for FREE Bulletin.

with semi-steel roller bearing wheels

THE SABIN MACHINE CO. 6536 Carnegie Ave., Cleveland, O.

SHIPPED ON APPROVAL Send Trial Order

▲ Mention Item NED-5102 when writing ▲

BENCH TYPE BELT GRINDER

Suited for burring gears, weld grinding, generating radii, removing flash, flat and edge work, cleaning-up and polishing, model BBS bench type belt grinder can be furnished with or without motor. Unit is equipped with endless metal cutting abrasive belt 2½ inches wide by 60 inches long, running 4500 surface feet per minute, driven by 1 horsepower motor. Design provides flat bed grinding area measuring 2½ x 8 inches as well as soft resilient contact wheel 7 inches in diameter by 2½ wide which is adaptable for grinding all types of metal. Wheels 6 to 8 inches in diameter can be used, having 1-inch arbor. Unit operates free from vibration. Made by **Porter-Cable Machine Co.**, 1710 N. Salina St., Syracuse 8, N. Y.

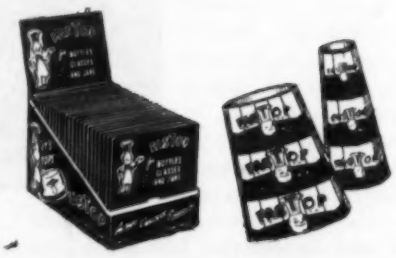
▲ Mention Item NED-5103 when writing ▲

LEATHER HAND GUARD

Claimed to substantially relieve shortage of cotton and leather palmed gloves for industrial use, No. 15160 Steel Grip thumb and two finger guard is made of chrome leather and fits over regular cotton work gloves. Increased service is afforded to cotton gloves since heaviest wear is usually encountered on thumb and two fingers which are protected by guard. Illustrated model is inseam cotton thread sewed. It may be had with outseam steel stitching if desired. Made by **Industrial Gloves Co.**, 555 Garfield Blvd., Danville, Ill.

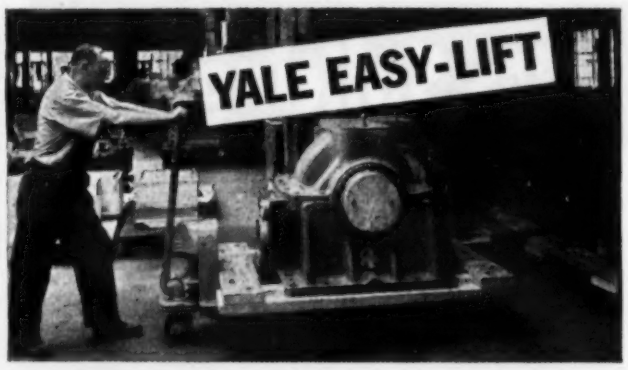
▲ Mention Item NED-5104 when writing ▲

BOTTLE & JAR CLOSURE



Made of simple combination of cellophane sheets and self-adjusting paperboard collars, Fastop closures are dustproof, moistureproof and easily applied by two-hand operation. They are constructed to seal in flavor and exclude foreign substances and odors. Closures are available in six standard sizes and will fit round topped containers ranging from beverage bottle size to standard glass jars. Made by **Fastop, Inc.**, 60 E. Forty-second St., New York 17, N. Y.

▲ Mention Item NED-5105 when writing ▲



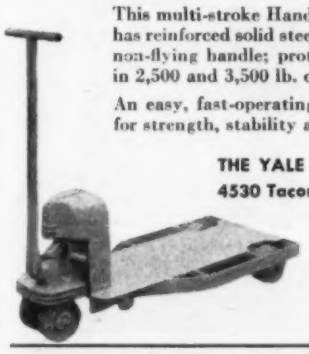
A Light Duty Hand-Lift Truck That's Easy to Operate . . .

Hundreds of industrial plants have found Yale's "Easy-Lift" Trucks the ideal answer to their materials handling problems.

This multi-stroke Hand-Lift Truck is sturdily constructed; has reinforced solid steel deck; roller bearings; free-steering, non-flying handle; protected lifting mechanism. Available in 2,500 and 3,500 lb. capacities.

An easy, fast-operating truck, Yale's "Easy-Lift" is built for strength, stability and long life. Write for circular.

THE YALE & TOWNE MANUFACTURING CO.
4530 Tacony Street • Philadelphia 24, Pa.



YALE

▲ Mention Item NED-5106 when writing ▲

PORTABLE sectional belt conveyors are ideal for handling boxes, crates, packages, parts, etc., in warehousing and shipping . . are proving themselves on hundreds of jobs in the present emergency where speed is important. For top performance . . industry specifies Jeffrey.

THE JEFFREY MANUFACTURING CO.

(Established in 1877)

952-99 North Fourth Street Columbus, Ohio

Baltimore, Birmingham, Boston, Buffalo, Chicago, Cincinnati, Cleveland, Denver, Detroit, Harlan, Houston, Huntington, W. Va., Milwaukee, New York, Philadelphia, Pittsburgh, St. Louis, Salt Lake City, Scranton

Jeffrey Manufacturing Co., Ltd. of Canada. Head Office & Works: Montreal
Branch Offices: Toronto, Calgary, Vancouver

▲ Mention Item NED-5107 when writing ▲

"In Seven Years Only one blown fuse on our Trimmer after we installed BUSS Super-Lag"

MR. FRANK MILLER, Chief Electrician
Strathmore Paper Company,
West Springfield and Woronoco, Mass.

THE FACTS—"In June, 1937, we installed a paper trimming machine which is powered by a 7½ horsepower, 440 volt, 3 phase motor. Almost immediately, we had trouble with fuses blowing when we started the machine.

"Then we installed BUSS Super-Lag fuses—and in seven years we have had only one blow to date. That proved to me the value of time-lag in fuses. Since then we have gone 100% to BUSS fuses in our 2 plants each a West Springfield and at Woronoco—and our fuse blows have been reduced by at least 30%."

Here is Why BUSS Fuses Greatly Reduce or Entirely Prevent Needless Blows

The fuse case is designed to insure good contact on the link even when the fuse is renewed by an inexperienced person—and it is so designed that vibration or heavy overloads or the constant heating and cooling of the fuse will not permit poor contact to develop. Thus excessive heating, which causes fuses to blow needlessly, is prevented.

The fuse link used is the famous "BUSS Super-Lag." It has lag-plates attached to it. These give a long time-lag so long that it will reduce to an extent not possible with any other renewable fuse the number of shutdowns caused by fuses blowing needlessly on starting currents or other harmless overloads.

How to solve the "shutdown" problem

Pass the word along that all purchase records dealing with circuit protective devices should be immediately changed to call for BUSS Super-Lag Renewable fuses. Then, as fuses are replaced or new installations made, your plant will automatically get the benefit of the carefree, trouble-proof protection that BUSS Super-Lag fuses afford.

BUSSMANN MFG. COMPANY
University at Jefferson, St. Louis 7, Mo.
Division McGraw Electric Company

BUSS Super-Lag FUSES

Sold Through Wholesalers

▲ Mention Item NED-5108 when writing ▲

VARIABLE SPEED CONTROL

Variable speed control of V-belt driven equipment up to a maximum 3 to 1 ratio is provided by this single lever controlled unit. Mechanically simple in design and sturdily constructed to withstand hardest service, models 1A and 2A Toledo variable speed controls have numerous unique features . . . including: plain, smooth pulley, eliminating noise and vibration; stepless speed variation up to full 3 to 1 ratio; minimum pulley diameters are increased to transmit greater H.P. over entire range; new pulley design providing cylindrical bottom for V-belts which fixes minimum pitch diameters, preventing damage to belts and giving increased torque; single arm support, for easy belt application; large shaft, oilite bearings and lubricant reservoir; sector plate serving as dial indicator and additional locking medium; unusually attractive prices.

Wheel assemblies can also be purchased without mountings for application on machines . . . providing built-in speed control.

If you have a variable speed control problem, either on plant equipment or on machinery you build for sale, investigate the Toledo variable speed control . . . you'll be interested in its efficiency and low price. Ratios as high as 10 to 1 are available. **The Toledo Timer Co.,** 2224 Albion St., Toledo, O. **—Advt.**

▲ Mention Item NED-5109 when writing ▲

▲ Mention Item NED-5110 when writing ▲

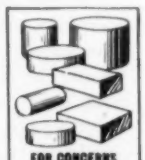
Immediate Delivery FROM STOCK

GREAVES-SILENT BAKELITE GEARS

No waiting when you order Greaves Silent Bakelite Gears. • We have them in stock NOW! • Your order will go forward immediately. • You'll appreciate the silent operation and added smoothness provided by Greaves Silent Bakelite Gears. • You'll marvel at their great strength to carry big power loads . . . their remarkable ability to successfully operate completely submerged in water. • You'll welcome their low cost. • No metal reinforcements required. • Save Time . . . Money . . . Labor!

We also make silent gears of rawhide and Fabriol.

Write for Circular.



FOR CONCERNS CUTTING THEIR OWN GEARS, WE CAN MAKE IMMEDIATE DELIVERY ON BLANKS SAWED TO SPECIFIED DIAMETER AND FACE

Greaves MACHINE TOOL CO.
2009-6 Eastern Avenue
Cincinnati, Ohio

▲ Mention Item NED-5111 when writing ▲

COMPRESSOR CONTROL

Combining seven devices for control of compressor operations into single compact unit, Compressor-Trol requires no pipe and fittings, is simple to install and reduces possibility of air leakage. It is made in ½, ¾ and 1½-inch sizes to cover all requirements of tank mounted compressors up to 15 horsepower or 60 cubic feet per minute. It is equipped with Ashcroft Duraswitch with either electric or mechanical attachment for operating two-way unloading valve on top of unit.

Muffler discharges into tank and acts to break up discharge and to disperse air in manner which insures adequate mixing with cooler gases in tank and thus reduces moisture content and temperature before delivery. Combined instrument has heavy duty, gearless movement, slide rule dial, horizontal self-draining and nonfreezing Bourdon tube and entire gage is removable and replaceable in case of accidental damage. Control can be furnished in all standard pressure ranges. Made by **Manning, Maxwell & Moore, Inc.,** Electro-Mechanical Div., 1943 Elias St., Bridgeport 2, Conn.

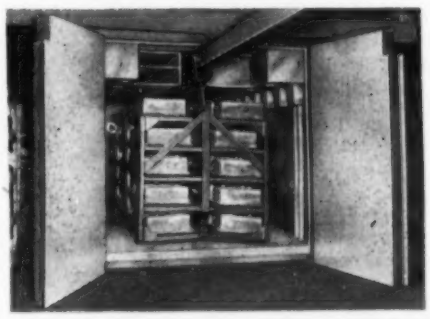
▲ Mention Item NED-5112 when writing ▲

METAL PARTS CLEANER

Cleaning of small brass, bronze, copper, gold, German silver, nickel and other alloy parts is readily effected with Nielco No. 1922 alkali cleaner. It is claimed to remove all trace of oil from smallest openings as well as remove any atmospheric oxides. Cleaner may be used in any type power washing machine, tumbling barrels or agitated cleaning unit. For fast cleaning, solution is used at temperatures of 212 degrees Fahr. Developed by **Nielco Laboratories,** 19720-24 Florence Rd., Detroit 19, Mich.

▲ Mention Item NED-5113 when writing ▲

VENTILATED CORE OVENS



Special ventilating enclosure, hood and stack installed with each unit of battery of core baking ovens in large midwestern aircraft cylinder head plant remove smoke, fumes and heat from hot cores. System also carries off much of molding sand dust from other parts of foundry.

Each oven has doors at both ends. Cores enter at front on racks carried by overhead monorail. When baked, they are pushed on through rear doors into ventilating chamber directly behind. Hood over enclosure is connected to 24-inch stack which projects several feet above highest point of roof. Located in stack is propeller type fan powered by 2-horsepower motor. Fan exhausts air from stack at rate of 9000 cubic feet per minute. Installation made by **Koch Industrial Equipment, Inc.,** 2124 Pennsylvania St., Evansville, Ind.

▲ Mention Item NED-5114 when writing ▲

SAVE TIME AND LABOR *with an* S-A CAR PULLER

One man, alone, can pull loaded freight cars by simply snubbing the free end of a pulling rope around the powerful capstan of the S-A Car Puller.

Note These Features:

Pull From Any Direction. Rope snubbed around capstan will pull from any angle.

Totally Enclosed—No moving parts to endanger operator.

Weatherproof—No special housing required.

Cut Helical and Worm Gears—Enclosed gears operate in constant bath of oil.

Powerful Hoist Type Motor—Enclosed, ball bearing motor has high starting torque.

Two Sizes—Nos. 11 and 12 to take care of most pulling requirements.

For full information, write for data book 1339.

STEPHEN S-ADAMSON MFG. CO.

Tellevel—Bin Level Controls · Car Loaders · Car Pullers · SealMaster Ball Bearings · Winches · Saco Speed Reducers

12 RIDGEWAY AVE., AURORA, ILLINOIS

▲ Mention Item NED-5115 when writing ▲

NEW! Controller for Electric Furnaces

An innovation in automatic control for electrically-heated furnaces, kilns, ovens, etc., Micromax Electric Control, Duration-Adjusting Type—is described for the first time in the catalog shown above.

This newest member of the Micromax family provides highly accurate proportional control with the utmost simplicity of equipment. Using a contactor instead of a rheostat, it constantly adjusts the length of *time* during which electric heat is applied to compensate for changes in ambient temperature, furnace charge, or any other factor which even slightly affects temperature.

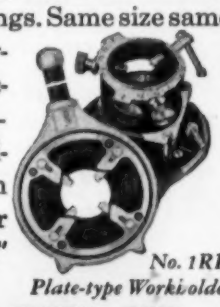
Write for Catalog N-00A(2)

LEEDS & NORTHRUP COMPANY, 4998 STENTON AVE., PHILA., PA.
LEEDS & NORTHRUP
MEASURING INSTRUMENTS · TELEMETERS · AUTOMATIC CONTROLS · HEAT-TREATING FURNACES
Jr. Ad. N-00A(5a)

▲ Mention Item NED-5116 when writing ▲

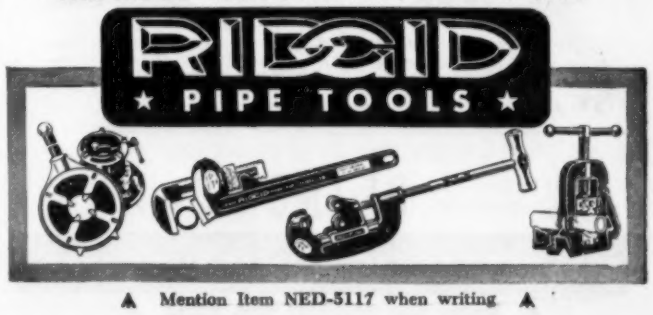
RIDGID No. 1RC—1" to 2" pipe

• Without extra cost RIDGID Poster gives you extra work-saver features. Mistake-proof workholder, quick positive setting—no bushings. Same size same number chaser dies are interchangeable. Direct threading action, handle to head to chasers—no cock-wobble. Rugged steel-and-malleable construction. Smooth perfect threads, 4 sets of alloy or high-speed steel dies for 1" to 2" pipe. Ask your Supply House.



No. 1RP, Plate-type Workholder

THE RIDGE TOOL COMPANY, ELYRIA, OHIO



▲ Mention Item NED-5117 when writing ▲

Do some "Victory Gardening" along your production lines

To get the utmost *or even extra* yield from every row of war-production machines, try some intensive cultivation with Facts in Figures as your trusty gardening tools. These facts, continuously supplied by Veeder-Root Counting Devices on each machine, show you any production *which you are not getting*, and so enable you to make the mechanical or power adjustments that *will* get it. These facts, too, warn of approaching routine maintenance needs. And they make it possible to co-ordinate all machine-departments more closely, so that final assembly can roll more smoothly and swiftly.

VEEDER-ROOT Inc. Hartford 2, Connecticut

In Canada: Veeder-Root of Canada, Ltd., Montreal

▲ Mention Item NED-5120 when writing ▲

Here's the RESPIRATOR for Safety and Comfort in PAINT SPRAYING!

M3C CHEMICAL RESPIRATOR

Sprayers can work safely and comfortably for long periods when wearing this efficient Pulmosan M3C Respirator. The chemical cartridge effectively filters and neutralizes mists and fumes of paints, enamels and lacquers. Extra large filtering area assures easy breathing. Aluminum body is very light and easily adjusted by wearer to a permanent Face Fit to any facial contour. Patented rubber face cushion, knitted cushion covers, flutter exhalation valve. Write for prices. Try them.

Types for EVERY hazard. Get literature.

Pulmosan Safety Equipment Corp.
176 Johnson St. Brooklyn 1, N. Y.

▲ Mention Item NED-5121 when writing ▲

REZNOR UNIT HEATER — REZNOR UNIT HEATER

Clean Gas Heat All in One Package

You can install a self-contained Reznor Unit Heater, and then forget it. The Heater can be suspended or placed on floor.

No Maintenance No Firing . No Dirt No Extra Equipment

A Reznor is entirely automatic. You need no fireman or boiler or anything except a gas connection.

Heat When You Need It—Where You Need It

You pay only for heat you use. Particularly adaptable to the mild season when you need heat only part of the time.

A Size for Every Type of Application

The Reznor Unit Heater comes in 9 different sizes. Used in factories, offices, stores, homes, churches, bowling alleys, restaurants, and other places.

REZNOR MANUFACTURING CO. **REZNOR** 101 JAMES STREET MERCER, PENNA.

"GAS HEATERS EXCLUSIVELY SINCE 1888"

▲ Mention Item NED-5122 when writing ▲

HIGH FREQUENCY GENERATOR

Completely self-contained, high frequency generators require only electrical connection to 60-cycle power supply and require no outside cooling or other auxiliaries, with 50 to 200 kilowatt ratings offered on special order. Available standard ratings are 1, 2, 5, 10 and 20 kilowatts. Primary voltage is 220 or 440 volts, single phase for ratings of 5 kilowatts or lower and 3 phase for 10 kilowatts and higher. Oscillator, power supply, blower and necessary switchgear are housed in single cabinet which has high frequency section completely shielded to minimize possibility of interference with nearby communication circuits.

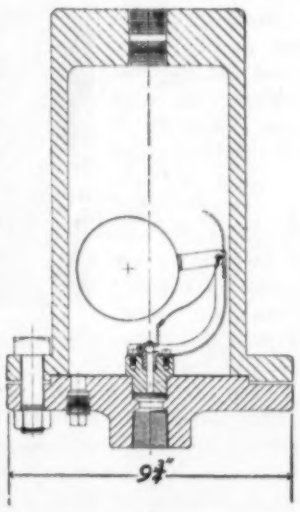
Automatic timing control permits load cycle adjustment to predetermined time which can be repeated automatically. Terminals are provided for remote control. Air cooled tubes are used in standard models, affording complete portability of 2, 5 and 10 kilowatt units and increased portability for 20 kilowatt model.

Generators are available for frequencies of 450 kilocycles, 5, 15 and 30 megacycles for ratings through 10 kilowatts and 450 kilocycles, 2 and 10 megacycles for 20 kilowatts and higher. This provides range of frequencies for handling all types of induction and dielectric problems. Time delay switches are used on all rectifiers. Step starters are used in 20-kilowatt and larger units. Made by Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

▲ Mention Item NED-5123 when writing ▲

HIGH PRESSURE AIR TRAP

Water is drained from compressed air systems operating under pressures of up to 1000 pounds per square inch with this No. 71-315 high pressure, snap action air trap. (*Editor's note: This trap was described Item NED-4711, Aug. 1944 issue using improper cut*). Jaw and cap are of forged steel and ball float is designed to withstand hydrostatic pressure of 1500 pounds per square inch.



Ball float is connected to short valve lever through flat stainless steel spring. As incoming water raises ball float, initially concave bent spring moves past dead center to snap float upward and open valve instantaneously. Drainage is immediate and when water level drops to predetermined point, cycle is reversed and spring snaps valve closed tightly. Wire drawing and throttling are eliminated. Ordinary oil and dirt encountered in airline service are handled without clogging. Made by Armstrong Machine Works, 819 Maple St., Three Rivers, Mich.

▲ Mention Item NED-5124 when writing ▲

Strong Beyond All Requirements

HALLOWELL

WORK-BENCHES of STEEL

Into every "HALLOWELL" Work-Bench of Steel we build strength, sturdiness and rigidity far beyond normal needs . . . qualities that win a reputation for serviceability and for economy.

Learn about the 1367 ready-made combinations of sizes and available structural features from which you can choose exactly what you need instead of wasting time and money on building your own Work-Benches.

Send for the "HALLOWELL" Catalog of Work - Benches of Steel.

Fig. 732. "HALLOWELL" Work-Bench of all-steel construction available—AT ONCE—in lengths of from 3 ft. to 10 ft.; in various heights and widths. Drawer is extra.

OVER 40 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.
JENKINTOWN PENNA. BOX 581

BRANCHES
BOSTON • DETROIT • INDIANAPOLIS • CHICAGO • ST. LOUIS • SAN FRANCISCO

▲ Mention Item NED-5125 when writing ▲

LOOK INTO GAST ROTARY AIR MOTORS

Your own investigations will satisfy you that in many explosion-proof applications and others where compressed air is available, the Gast Rotary Air Motor offers many marked advantages. Write today for your copy of the new descriptive folder, "Industry's Trend to Air for Power."

ALWAYS EFFICIENT. Automatic take-up for wear is a feature inherent in rotary design.

VARIABLE SPEED easily controlled by varying air pressure.

NO SPARKS, therefore explosion-proof. Meets all safety requirements.

SIMPLE, trouble-free operation. No springs behind vanes, shaft packing does not require adjustment.

CAN'T BURN OUT by overloading—no matter how frequently, or suddenly it is stopped.

AVAILABLE. Low in cost, good delivery on essential industrial applications.

COMPACT. Unbelievable power in proportion to small size.

GAST ROTARY AIR MOTORS • COMPRESSORS VACUUM PUMPS

GAST MFG. CORP., 115 HINKLEY STREET, BENTON HARBOR, MICHIGAN

▲ Mention Item NED-5126 when writing ▲

Typical Jobs

Drawing and Blanking Die "Saves time in producing smooth base metal finish."

Compressor Yoke. Alignment maintained and better finish produced.

Automobile Distributor Shaft Gears. Taper removed at a rate of 80-90 per hour.

Bearing. A very small part. 2 micro-inch finish necessary.

Carbureter Idler Valve Jet. Hole is honed after reaming for smooth action.

Aluminum Aircraft Link produces high finish without bell-mouthing.

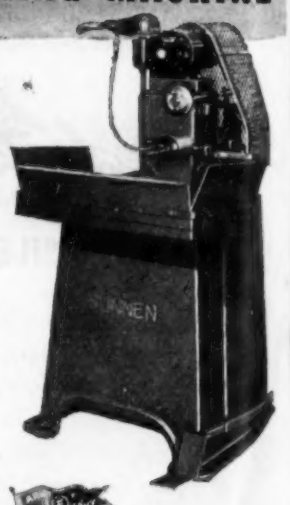
Shell Loading Die.

Cast Iron Valve Stem Guide. ½ to one thousandth removed—220 pieces per hour. Better finish and straighter hole.

Stainless Steel Load Compensator Valve Seat. Hole is honed to .0002" limit.

PARTS LAST LONGER

When Honed on the SUNNEN PRECISION HONING MACHINE



Time after time, users of the Sunnen Precision Honing Machine have shown that they get longer service and have fewer repairs than by any previous method of internal finishing.

There's a good reason for these results, too. This machine has an amazing record for accuracy. Straight, round holes are produced with a guaranteed accuracy of .0001". Accuracy has been held to .000025" on hardened steel jobs. A super-smooth finish of from 2 to 3 micro-inches provides a better working surface.

The coveted Army-Navy "E" waves over the Sunnen plant, evidence of the important part Sunnen equipment is playing in the war effort.

A new base and pump assembly, recently introduced, has improved results still further. The pumping unit provides a constant flow of honing fluid that acts as a coolant, carries away cuttings, and keeps the abrasive stone in sharp cutting condition.

There are many other reasons why the low-cost Sunnen Precision Honing Machine will give you a finish that makes parts last longer. Get complete information by calling a Sunnen engineer to your plant —or write for free bulletin.

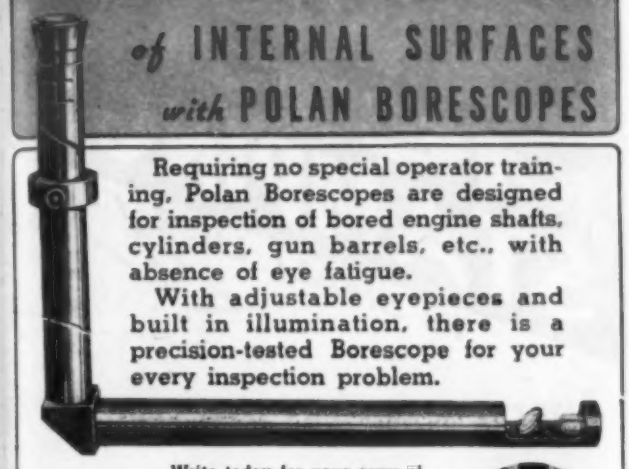
SUNNEN

SUNNEN PRODUCTS COMPANY
7931 Manchester Avenue St. Louis 17, Missouri

Canadian Factory: Chatham, Ontario

▲ Mention Item NED-5127 when writing ▲

VISUAL INSPECTION of INTERNAL SURFACES with POLAN BORESCOPES



Requiring no special operator training, Polan Borescopes are designed for inspection of bored engine shafts, cylinders, gun barrels, etc., with absence of eye fatigue.

With adjustable eyepieces and built in illumination, there is a precision-tested Borescope for your every inspection problem.

Write today for your copy of Borescope Bulletin No. 510.

Unretouched photo of gun barrel section.

AWARDED TO ZENITH OPTICAL CO a unit of

Polan Industries

HUNTINGTON 19 • WEST VA.

▲ Mention Item NED-5128 when writing ▲

For Hydraulically Driven Machinery

VICKERS HYDRAULIC (OIL) PUMPS

Vickers Vane Type Pumps, having the exclusive pump design features which have revolutionized oil hydraulic power methods, are available in hundreds of sizes and types:

1 G.P.M. to 60 G.P.M. Pumps, to 1000 P.S.I. . . . Bulletin 40-25
Two-Stage Pumps to 2000 P.S.I.—2 G.P.M. to 57 G.P.M. . . . Bulletin 40-16
Two-Pressure Large-Small Volume Pumps . . . Bulletin 38-14

Applications include hydraulically operated machine tools, presses, plastic and die casting machines, special processing machines, road machinery, etc.

Write for information covering your requirements.

VICKERS Incorporated

1456 Oakman Blvd. • DETROIT, MICHIGAN

▲ Mention Item NED-5129 when writing ▲

"WHEN WOMEN WELDERS WEAR COMFORTABLE AO CLOTHING THEY FEEL LIKE WORKING"

These good looking clothes come in welder's leathers with a rich, soft suede appearance. And they're specially tailored to a woman's taste. Notice the trim fit? These clothes make women feel like working. Free-action lines help women welders to move around quicker with less effort. Tough, long-wearing chrome tanned cowhide gives better protection . . . helps *keep* women on the job.

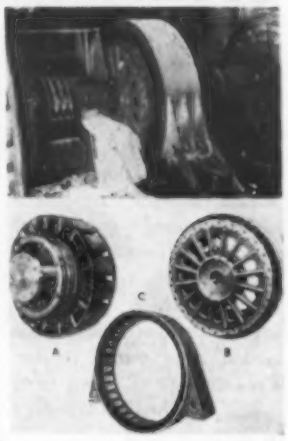
Help your women welders work *easier*. Dress them up in AO style. AO's smart line of welders' clothing includes Tailored Coats, Short Jackets, Overalls, Sleeves, Aprons and a Turban to protect women's hair and ears while welding. Your nearest AO Branch Office can give you full details. Get in touch with them today.

American Optical COMPANY

SOUTHBRIDGE, MASSACHUSETTS

▲ Mention Item NED-5130 when writing ▲

ELECTRIC REDUCTION DRIVE



Providing reduction of speed between high speed prime movers and low speed drive shafts for mechanical applications where gear and coupling combined are ordinarily necessary, this Bowes electric drive is available in reversing and non-reversing type. In addition to maintaining substantially constant speed ratio between driving and driven members of ship propulsion equipment, unit also generates some power for auxiliary service loads through slip ring take-off circuits. It can thus be used as source of electrical power on ship board. Non-reversing type is available in sizes from 300 brake horsepower.

Three main elements consist of (A) engine element which is bolted to prime mover shaft, (B) shaft element which is coupled to driven shaft, and (C) stationary element. Engine element is essentially a synchronous generator rotor with poles selected for desired speed ratio and is permanently attached to prime mover shaft. Driven shaft element consists of rotating spider on which two armatures are concentrically mounted in relation to engine element. Inner armature, together with engine element, forms generator and also transmits torque to driven shaft. Outer armature makes use of field of third or stationary element to operate as motor and convert electrical energy into mechanical energy for turning driven shaft.

If shaft element is held stationary, inner parts of drive act as synchronous generator and electrical energy can be taken continuously from drive. This is of particuluar advantage on ship propulsion systems where large amounts of power are frequently required when vessel is in port. Made by Elliott Co., Jeanette, Pa.

▲ Mention Item NED-5131 when writing ▲

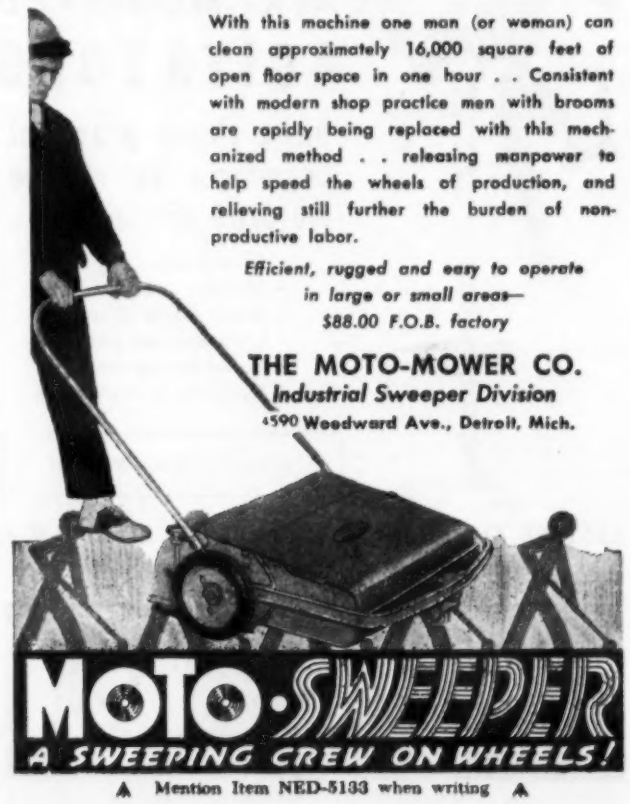
PORTABLE PUMP

Easily carried in one hand to trouble spot, Pinch-Hitter self-priming, centrifugal pump can be attached and placed in operation in space of three minutes. No extra piping is required because of flexible hose. Pump has 110-volt heavy duty, ball bearing motor. Sturdy construction provides for handling abrasives or steel chips. It can also be used for cleaning sumps and for liquid transfer.

Capacity is: water soluble, 1200 gallons per hour; light oil, 1000 gallons per hour; heavy oil, 600 gallons per hour. Pump will deliver from drop per minute to full capacity by regulating discharging nozzles. It will handle four nozzles. Price of unit is $89.50 complete with motor, cord and plug, suction and discharge hose and one nozzle. Made by Brady Pump Co., Muncie, Ind.

▲ Mention Item NED-5132 when writing ▲

one man SWEEPING DEPT. $88.00



With this machine one man (or woman) can clean approximately 16,000 square feet of open floor space in one hour . . Consistent with modern shop practice men with brooms are rapidly being replaced with this mechanized method . . releasing manpower to help speed the wheels of production, and relieving still further the burden of non-productive labor.

Efficient, rugged and easy to operate in large or small areas—
$88.00 F.O.B. factory

THE MOTO-MOWER CO.
Industrial Sweeper Division
4590 Woodward Ave., Detroit, Mich.

MOTO-SWEEPER
A SWEEPING CREW ON WHEELS!

▲ Mention Item NED-5133 when writing ▲

REMOVE SCALE, PAINT, RUST, Quickly . . . Easily . . . Use

AURAND

CLEANING TOOLS

For any hard metal or stone surface—iron — steel — brick — concrete — etc.

Electric or Pneumatic 2 sizes of each

It's easy to remove paint, scale, rust and other accumulation with AURAND Cleaning Tools. Powered, rotary chipping does a thorough cleaning job in less time. No special skill required. Even depth surface is assured by an adjustable shoe control. Cutter heads are renewable.

For Further Information Address Dept. 14

AURAND MFG. & EQUIP. CO.
2643 Colerain Avenue • CINCINNATI, OHIO

▲ Mention Item NED-5134 when writing ▲

ONE HAND LIFTS 50 TONS

HEIN-WERNER HYDRAULIC JACKS

are super-powerful and easy-operating

Factories, mines, shipbuilders and contractors can save a lot of time and effort by utilizing Hein-Werner Hydraulic Jacks . . . These super-powerful, easy-operating jacks are especially suitable on jobs involving lifting of heavy loads, moving machinery, pressing gears, pinions, bushings, etc.

Complete H-W line includes models of 3, 5, 8, 12, 20, 30 and 50 tons capacity . . . For details, consult your nearest industrial supply distributor, or write us.

HEIN-WERNER MOTOR PARTS CORP.
Waukesha, Wisconsin

HEIN-WERNER HYDRAULIC JACKS
Are Built Right and Priced Right

▲ Mention Item NED-5135 when writing ▲

"You've Certainly Got Something and the Trucking Industry Is Looking For It!"

Says Mr. R. Aramiam, Fleet Supt., Roosevelt Cartage Co., Chicago, Ill.

Like 95% of the operators of more than 100,000 motor vehicles recently surveyed, Mr. Aramiam says he "would more than welcome a dependable self-locking nut—a nut that *can't* shake loose."

Once tight, the Boots Nut *stays* tight. Its built-in lock holds an unshakable grip—will never loosen, until you take off the nut for use again. Being 100% metal, Boots are not affected by oil, gasoline, heat or cold.

The Boots Nut was developed and first put into production in 1942. Since no design changes are necessary for its use, you can expect Boots protection on even the *first* post-war models of trucks, buses and passenger cars.

Motion Picture—"All Work And No Play"—16 mm. sound—30 minutes. Write for information

BOOTS SELF-LOCKING NUTS
"There's No Excuse for a Nut Shaking Loose"

Boots Aircraft Nut Corporation, Dept. A-26 New Canaan, Conn.

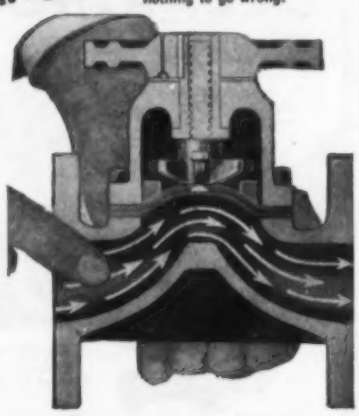
Representatives in New York • Chicago • Detroit • Buffalo • Indianapolis
Los Angeles • Kansas City • Dallas • Toronto • Montreal • Vancouver

▲ Mention Item NED-5136 when writing ▲

If you're stymied by Valve Troubles

write HILLS-McCANNA Veteran Diaphragm Valve Engineers today—

The Valve that has nothing to go wrong.



Learn how Hills-McCanna improvements have made this Saunders Patent Valve the sensation of the day.

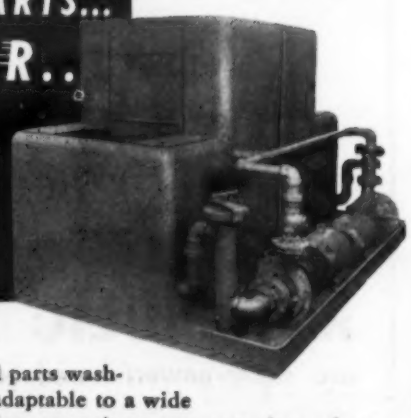
The revolutionary diaphragm opening and closing principle automatically eliminates the faults and failures common with globe and gate valves, plug cocks, etc.

Note the streamlined flow area—absence of pockets and ports—isolated working parts—utmost simplicity. These factors give you long service with practically no maintenance. Catalog V-44 upon request.

HILLS-McCANNA CO.
2455 NELSON STREET • CHICAGO 18, ILL.
Manufacturers of Proportioning Pumps • Air & Water Valves • Chemical Valves • Marine Valves • Force-Feed Lubricators • Magnesium Castings

▲ Mention Item NED-5137 when writing ▲

CLEAN SMALL METAL PARTS... FASTER.. BETTER AT LOWER COST

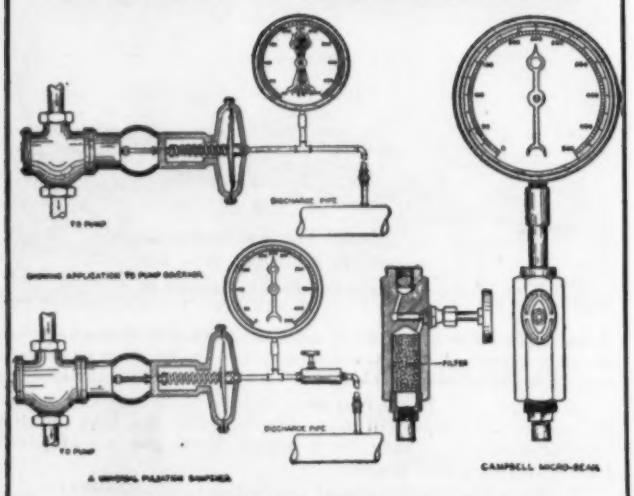


This compact HOWARD small parts washer is unusually adaptable to a wide variety of cleaning operations—yet occupies only a few feet of floor space. As a result, it is setting new records for low-cost production in every type of metal-working plant. It is likely that this HOWARD machine can handle your cleaning operations easier and more profitably. Write for details, and for analysis of your cleaning and finishing problems. No cost or obligation. Catalog on request.

HOWARD ENGINEERING & MFG. CO.
1050 HULBERT CINCINNATI 14, OHIO
ENGINEERING for PRODUCTION CLEANING

▲ Mention Item NED-5138 when writing ▲

KILLS PULSATION



INSTALL THE AMAZING CAMPBELL

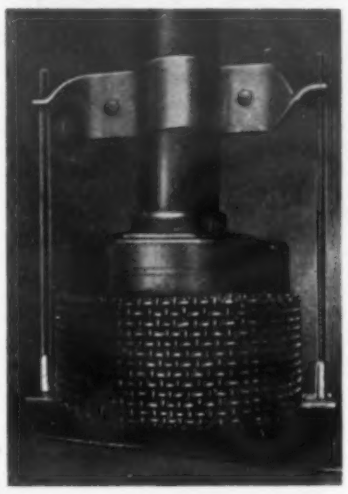
MICRO-BEAN

Ideal for all governors and gauge lines. A super-sensitive valve mechanism. Very simple design. Will not pinch off over an extreme pressure range. Does what an ordinary valve can't do. Unique taper design minimizes tendency to shut off to approximately 2% of what it would be with an ordinary valve. Handles steam, fuel oil, air, gas, water. Ask for Bulletin.

J. A. CAMPBELL CO.
645 E. Wardlow Road Long Beach, Calif.

▲ Mention Item NED-5139 when writing ▲

COOLANT STRAINER



Straining metals and particles from water, oils and emulsions, Model F Metex coolant strainer has straining element of large surface and depth area which encloses base intake of immersed centrifugal pumps. Fixture bolts to pump shaft and centers strainer which is drawn up on threaded bolts and sealed over pump intake. Feet or lugs of pump base casting embed themselves in mesh.

Large openings in mesh in relation to diameter of wire from which it is knitted provide ample capacity to hold chips and dirt without clogging. Retention of residue increases efficiency. Action of moving coolant fluid serves to wash off surface accumulation. Made by Metal Textile Corp., 2 Central Ave., Orange, N. J.

▲ Mention Item NED-5140 when writing ▲

PROTECTIVE HAND CREAM

Developed for workers whose jobs bring them into contact with water soluble cutting oils, dilute acids, alkalies and other water chemical mixtures, Pro-Tek No. 2 protective hand cream is intended for operations where standard water soluble cream is unsuitable. It is applied to hands and arms before starting work. It forms flexible, slightly greasy film which acts like invisible glove. One application lasts from 3 to 4 hours and may be removed by using industrial hand cleanser or washing in hot water with mild soap. Cream is neutral in reaction and non-irritating. Made by E. I. du Pont de Nemours and Co., Wilmington 98, Del.

▲ Mention Item NED-5141 when writing ▲

DUAL PURPOSE MACHINE

Performing both center lapping and drill press operations, 2-in-1 machine affords savings in equipment costs and floor space. Machine is changed over from one operation to other by lifting pin and swinging center grinder dresser in or out of position. Illustration shows unit being used as drill press.

Machine is easily portable, weighing only 165 pounds. Capacity of drill press, which will drill to center of 13-inch circle, is ½ inch. Dresser is adjustable from 20 to 100 degrees. Unit is shipped complete with 110-volt motor, V-belt drive, diamond and 1½-inch lapping stone. Made by Dalzen Tool & Mfg. Co., 12255 East Eight Mile Rd., Detroit 5, Mich.

▲ Mention Item NED-5142 when writing ▲

PNEUMIX AIR MOTORED AGITATORS

have these practical advantages over electric motored mixers .....

- Greater safety
- Variable speeds
- Wider range of uses
- Lighter—more portable
- Lower upkeep cost
- Simplicity of construction

Send for New Booklet

ECLIPSE AIR BRUSH CO., 309 Park Ave., Newark 7, N. J.
Manufacturers of Fine Spraying Equipment

ECLIPSE

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METAL STAMPINGS IN SMALL LOTS

ECONOMY and ACCURACY are the two factors to be considered when Die Cut Metal Stampings in limited quantities are needed. Our booklet, "Metal Stampings in Small Lots", will explain to you how accurate die cut parts can be produced at a very low cost.

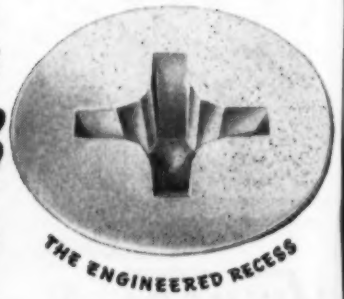
Write for illustrated booklet 176-13

DAYTON ROGERS MANUFACTURING CO. 2837 12th Ave. S., Minneapolis 7, Minn.

▲ Mention Item NED-5144 when writing ▲

WHEN THIS WANTED Assembly Workers *DREW A BLANK THE BOSS TORE HIS HAIR UNTIL SOMEONE WISED HIM UP TO THIS THE RECESSED HEAD SCREW THAT UPS DRIVING SPEED AS MUCH AS*

50% IT'S PHILLIPS



Stymied because you've just got to boost assembly department output and you can't hire more workers to do it? No need to be!

You can boost output another way – by switching to Phillips Recessed Head Screws. They will increase driving speed as much as 50 percent. They have done it for hundreds of plants!

With Phillips Recessed Head Screws, your workers encounter none of the troubles that cause slow driving. Spiral and power driving can be used where speed tools have always been impractical. And, the work becomes so much easier that assemblers can maintain a fast pace throughout a shift.

Switch to Phillips Recessed Head Screws. You'll find they'll give you faster driving, easier driving, greatly increased output. You'll also find they *cost less to use!*

PHILLIPS *Recessed Head* SCREWS

Wood Screws • Machine Screws • Self-tapping Screws • Stove Bolts

24 SOURCES

American Screw Co. • Atlantic Screw Works • The Bristol Co. • Central Screw Co. • Chandler Products Corp. • Continental Screw Co. • The Corbin Screw Corp. • General Screw Mfg. Co. • The H. M. Harper Co. • International Screw Co. • The Lamson & Sessions Co. • Manufacturers Screw Products • Milford Rivet and Machine Co. • The National Screw & Mfg. Co. • New England Screw Co. • Parker-Kalon Corp. • Pawtucket Screw Co. • Pheoll Manufacturing Co. • Reading Screw Co. • Russell Burdsall & Ward Bolt & Nut Co. • Scovill Manufacturing Co. • Shakeproof Inc. • The Southington Hardware Mfg. Co. • Wolverine Bolt Co.

▲ Mention Item NED-5145 when writing ▲

Instead of Steel—use

NYWOOD LOCKERS & CABINETS

Here are some special values in famous Nywood Storage and Wardrobe Cabinets.

No. 682C Storage Cabinet 36x18x72 $35.04

No. 682W—Same Size in Wardrobe $29.71

No. 642C Storage 36x24x72 $39.36

No. 642W—Same Size in Wardrobe $32.03

NYWOOD CABINET

NYWOOD LOCKERS

NYWOOD products are built of sturdy plywood, made termite-proof, resistant to fire and protected against salt water, weather and odors through immersion in special solution. Tough, lacquer exteriors, office green. Interiors, tops and bottoms neutral tone finish resulting from processing solution. Complete line of sizes and sectionizing. Easy assembly. Attractive prices.

STEEL STOOLS AND OTHER OFFICE AND SHOP EQUIPMENT

Excellent line of all steel shop boxes, drawer units, work benches, rotabins, etc., etc.—ready for immediate shipment. Adjustable steel stool illustrated in various heights—with or without backrest.

Tell us what you need, we'll send details and prices

NYCE Metal Products Company

4308 N. Broad St., Phila., Pa. • Phone MIChigan 6463

▲ Mention Item NED-5146 when writing ▲

How to cut Welding Costs ... increase production!

See for yourself! Here's the whole story of the new, versatile P&H welding positioner. Here are the facts you want to know . . . how positioned work saves time, saves costs—based on actual case studies. It's all clearly explained—completely illustrated.

Why put off the savings the new P&H 2500 lb. capacity positioner can give you? Send for your copy of Bulletin WP-2 today! The P&H Model WP-2 Welding Positioner provides more operating advantages than you have ever known in a unit of such low price.

Gen. Off.: 4537 W. National Ave., Milwaukee 14, Wis.

HARNISCHFEGER CORPORATION

ARC WELDERS • EXCAVATORS • ELECTRIC CRANES • P&H • MOTORS • HOISTS • WELDING ELECTRODES

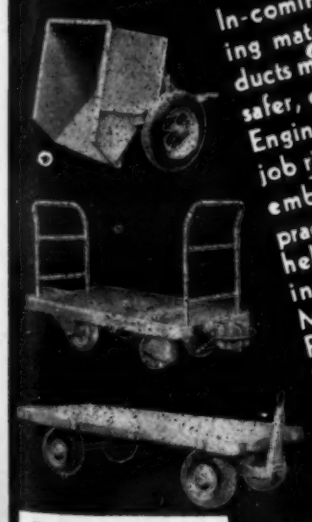
Canadian Distribution: The Canadian Fairbanks-Morse Co., Ltd.

▲ Mention Item NED-5147 when writing ▲

Watch how materials **GET GOIN' on EWC TRAILERS!**

In-coming and out-going materials and products move faster, surer, safer, on EWC Trailers. Engineered to do the job right, EWC Trailers embody 90 years of practical experience in helping many types of industries solve their Materials Handling Problems.

Let us help you. Write today for Illustrated Bulletins and full details.



Electric Wheel Co
Dept. N
Quincy IN

EWC TRAILERS

▲ Mention Item NED-5148 when writing ▲

MILLING CUTTERS

Featuring readily adjustable and replaceable bits, Progressive milling cutters are available in three styles. Type A is designed to operate on vertical or horizontal milling machines for facing off, grooving and recessing operations. Increased production may be obtained through use of carbide tipped bits in any of these tools. Style B, illustrated, is intended for use on boring mills to face off steel and castings. This model can be furnished with cutter bits on both sides of head for slotting operations. Type C cutterhead for form and profile finish or end milling uses formed cutters. It can also be used for dovetail cutting. Formed bits can be used to produce practically any required shape. Made by **A. Kutscha Cutter Co.**, 7237 S. Michigan Ave., Chicago, Ill.

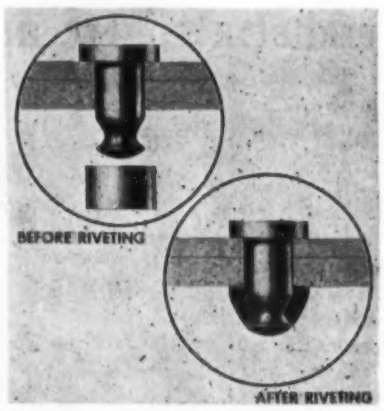
▲ Mention Item NED-5149 when writing ▲

FUNGUS RESISTANT COATING

Applied to phenolic parts of communications and other electrical equipment designed for use in tropical climates, Durad fungus resistant coating No. 524 is varnish and is applied by spray, dip or brush. It is designed for use in coating terminal blocks, junctions and fixed windings of motors, generators and dynamotors. It is claimed to pass tests for dielectric strength, hardness, flexibility and resistance to salt spray and thermal shock. Made by **Maas & Waldstein Co.**, 438 Riverside Ave., Newark 4, N. J.

▲ Mention Item NED-5150 when writing ▲

FASTENING DEVICE



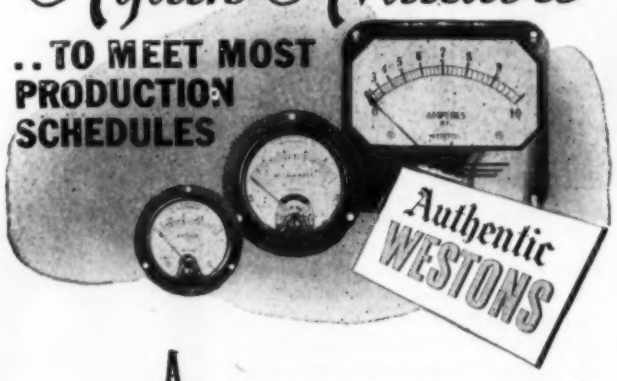
Eliminating need for heavy bolts, nuts and shims or use of more rivets of softer material, Hi-Shear rivets consist of pin and collar. Rivet pin is alloy steel, heat treated to minimum tensile strength of 125,000 pounds per square inch and then cadmium plated. Malleable collar of A17ST anodized aluminum alloy is swaged into grooved pin head by simple rivet set having conical bore in end. Rings of excess collar material are automatically ejected through port in set by pressure from succeeding rings. Set can be used as part of bucking bar or fitted to rivet gun.

Shear strength is same as that of corresponding size of standard aircraft bolt. Fasteners are available in comparable sizes to AN hexagon head aircraft bolts. Licensed by North American Aviation, Inc. Made by **Pheoll Mfg. Co.**, 5700 W. Roosevelt Rd., Chicago 50, Ill.

▲ Mention Item NED-5151 when writing ▲

Again Available

.. TO MEET MOST PRODUCTION SCHEDULES



At WESTON, production finally has outstripped the overwhelming war demand for panel and other instruments . . . making WESTONS again obtainable on a basis to meet most war production schedules.

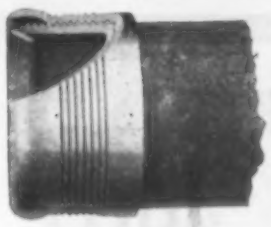
To experienced instrument users, this means they again can obtain the instruments whose design and manufacture incorporate the broadest instrument experience in surmounting the requirements of exacting applications. The instruments whose consistent, uniform performance simplifies their problems of inspection, handling and other burdensome procedure . . . and whose dependable, long-term accuracy assures better operating performance from the devices into which they're built.

Why not discuss your instrument schedules with WESTON, today . . . and be sure of obtaining the added product efficiency which authentic WESTONS provide.

Weston Electrical Instrument Corporation
618 Frelinghuysen Avenue, Newark 5, N. J.

▲ Mention Item NED-5152 when writing ▲

★ the most EFFICIENT way to weld pipe is with WEDGE Split CHILL RINGS



Patent No. 2,156,169

There is always a BEST way to do any operation and that applies to welding pipe. WEDGE Chill Rings with the Patented SPLIT Feature sets a new and higher standard for pipe welding. If you weld pipe, investigate.

Split Feature Patented

★ For UNDAMAGED Threads Specify WEDGE Thread Protectors

You can avoid damage to valuable parts by having threads protected with WEDGE Thread Protectors. They can be applied at the pipe threading machine. Specify WEDGE Thread Protectors when ordering pipe.

WEDGE PROTECTORS, INC.

9528 RICHMOND AVE. CLEVELAND 5, OHIO

Use WEDGE Chill Rings-Thread Protectors!

▲ Mention Item NED-5153 when writing ▲

This NEW Flame Priming and Descaling Nozzle Offers the Following ADVANTAGES . . .

1. Replaceable Meehanite skid shoes for wear resistance.
2. Skid shoe lugs of proper dimension permit "dragging" over metal surface at all desired angles.
3. All parts accessible for cleaning.
4. Patented AIRADIATOR cooling section prevents pre-ignition of pre-mixed gases.
5. Victor SPIRAL MIXER AND GAS PROPORTIONER maintains proper gas ratios and velocities and limits back-firing.

Descaling Attachment Model 361 has 4" ribbon flame width. Attachment Model 362 has 6" ribbon flame width.

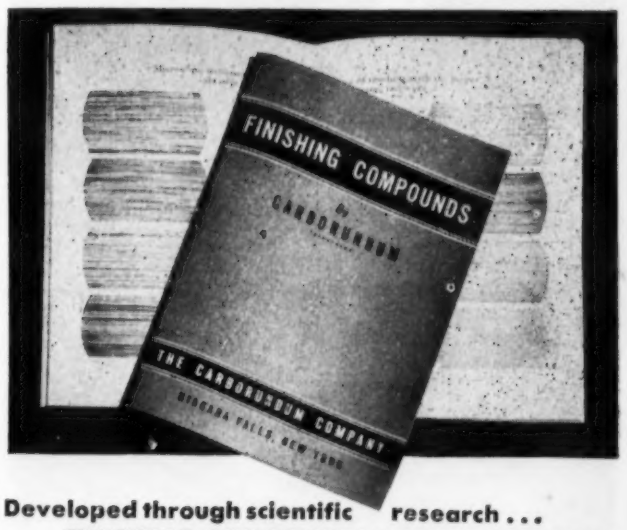
For inaccessible areas or rivet heads, use VICTOR Circular Multi-Flame Heating Nozzles made in suitable sizes.

These attachments and nozzles fit all Standard Victor Welding Torch butts of the "300" series.

VICTOR EQUIPMENT COMPANY

844 FOLSOM STREET • SAN FRANCISCO 7

▲ Mention Item NED-5154 when writing ▲



Developed through scientific research . . .

FINISHING COMPOUNDS BY CARBORUNDUM

FINISHING compounds by Carborundum are the result of the development of carriers for specific finishing applications, the accurate grading of abrasive grain and the correct type of abrasive. These compounds are produced in grit ranges from 60 down to 1000 to meet all conditions. Made with four types of abrasives—Carborundum Brand Silicon Carbide, Aloxite Brand Aluminum Oxide, garnet and the diamond. For complete details regarding various grades, correct application and lapping procedure, send coupon today for new free booklet "Finishing Compounds by Carborundum." The Carborundum Company, Niagara Falls, N. Y.

The Carborundum Company
Niagara Falls, N.Y., Dept 4D
Please send my free copy of "Finishing Compounds by Carborundum."
Name_____
Title_____
Company_____
Address_____
State_____

Abrasive Products by **CARBORUNDUM**

Sales Offices and Warehouses in New York, Chicago, Philadelphia, Detroit, Cleveland, Boston, Buffalo, Pittsburgh, Cincinnati, St. Louis, Grand Rapids

(Carborundum and Aloxite are registered trade marks of and indicate manufacture by The Carborundum Company)

▲ Mention Item NED-5155 when writing ▲

How to Clean UNIT HEATERS

Fully Described In New Service Report

Effective cleaning of unit heaters and thorough removal of dust, oil, lint or soot accumulations can be easily accomplished when you employ the successful Oakite method described in new Oakite Service Report.

Just make up recommended solution of Oakite Composition No. 20 and apply with the Oakite Solution-Lifting Gun, Model 391. Either air or steam pressure may be used. You will find the two-fold combination of effective detergent action and mechanical force quickly frees the heating coils and other surfaces of all foreign matter.

This valuable Service Report is yours for the asking. Write for it today.

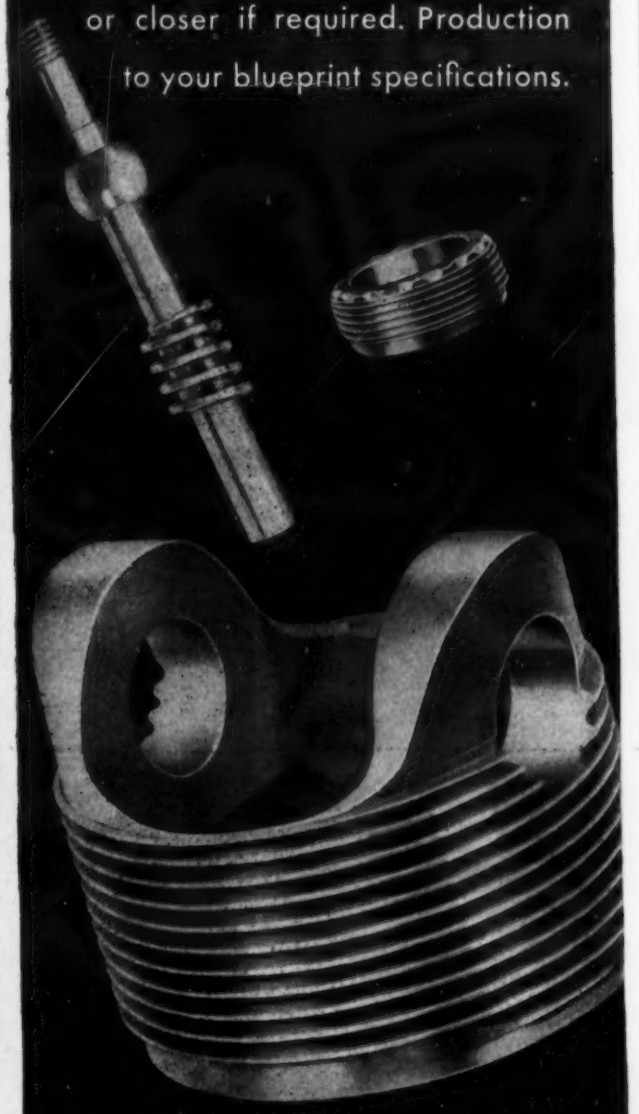
OAKITE PRODUCTS, INC., 32G THAMES ST., NEW YORK 6, N. Y.
Technical Service Representatives in All Principal Cities of the United States and Canada

OAKITE — Buy Bonds for Victory — CLEANING
MATERIALS · METHODS · SERVICE — FOR EVERY CLEANING REQUIREMENT

▲ Mention Item NED-5157 when writing ▲

THREAD GRINDING OF PRECISION PARTS

We are equipped to grind threads to .001 pitch diameter tolerance, or closer if required. Production to your blueprint specifications.



Also: Taps · Gages · Steel Stamps and Dies

SOSSNER

161 Grand Street, New York 13
or 27 Broadway, Lynbrook, N. Y.

▲ Mention Item NED-5158 when writing ▲

GEAR TOOTH SHAVER

Designed for finishing both internal and external gears ranging from 12 to 36 inches in pitch diameter, model GCQ-36 Red Ring gear tooth shaving machine features simple selective control and facilitates handling of parts. Machine operates on rotary crossed axes shaving principle and work is carried horizontally on power driven work table. Since there are no obstructions directly over work table, blanks can be lowered directly on to table by overhead crane or power hoist which can be furnished as optional equipment.

Work is lifted out of quick clamping fixture by self-contained hydraulic work ejector. Machine consists essentially of rotary work table, quick clamping fixture, and horizontal feed slide which carries on its forward end the cutter head with vertical cross feed slide.

After placing cutter in mesh with upper ends of work gear teeth, machine is started. As work and cutter rotate, cutter head moves slowly downward at rate of between 0.004 and 0.016 inch per work gear revolution. This rate of travel is varied by means of change gears. Entire cycle is semi-automatic. Central push button and selector switch control station is located within easy reach of operator. Cutter spindle may be adjusted axially to total range of 40 degrees to obtain any necessary angle between axes of work gear and cutter. Single knob controls increment of infeed at each end of cutter head stroke. Lever operated reverse gear provides for change in relation of direction of feed and direction of table rotation. Other features include automatic lubricating system, self-contained coolant pump and ready accessibility through interlocked doors. Made by National Broach & Machine Co., 5603 St. Jean Ave., Detroit 13, Mich.

▲ Mention Item NED-5159 when writing ▲

FIREBOX FLAME INDICATOR

Enabling furnace and boiler room operators to see flame characteristics in firebox, Cat's-Eye indicators are easily attached to burners or peep-holes with no adjustments, charts or electrical hook-ups. Device is safe, has no glare, does not get hot and will not permit flareback.

Center of eye is clear to show flame in its natural color and outer frosted portion is sensitive shadow screen reflecting slightest change in combustion. It can be seen at glance from any point in boiler room. Operator can make necessary adjustments in fuel-air ratio without leaving his station. Units are made in three models: A, with external lugs; B, with internal lugs; and C, which is threaded for pipe extensions. All models are identical in size and in operation. Made by Ess Instrument Co., Fort Lee, N. J

▲ Mention Item NED-5160 when writing ▲

POWERS TEMPERATURE and HUMIDITY CONTROL

When you want accurate and dependable automatic temperature or humidity control for Industrial Processes or Air Conditioning Systems call in a Powers engineer. With a very complete line of self-operating and compressed air operated controls we are well equipped to fill your requirements.

Write for Circular 2520

THE POWERS REGULATOR CO.
2740 Greenview Avenue, CHICAGO

Offices in 47 Cities—See your phone directory

50 Years of Temperature and Humidity Control

▲ Mention Item NED-5161 when writing ▲

YOU'LL WANT A COPY OF THIS New Catalog IF YOU USE THESE ITEMS

MACHINE PRODUCTS CORPORATION
6763 E. McNichols Road • Detroit 12, Mich.

▲ Mention Item NED-5162 when writing ▲

Airgrit

THE New MATTHEWS MARKING METHOD

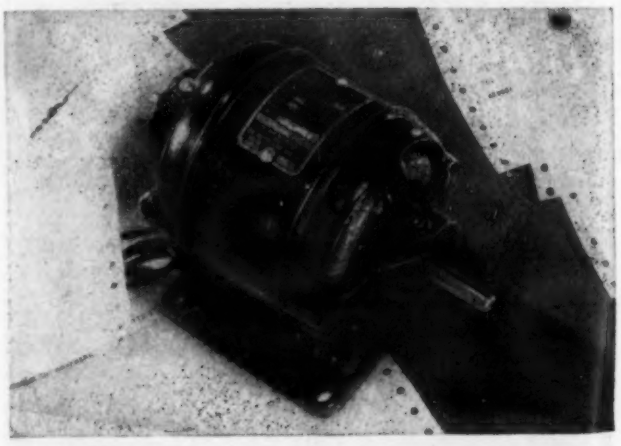
for MARKING DELICATE . . . PRECISION PARTS

Highly polished, delicate . . . precision parts . . . of metal, glass, plastics, fibre, etc. . . . marked legibly without distorting or marring the surface. Impression is a light frosted mark obtained by a fine grit material, blown against a mask into which desired marking is cut. Write today for complete information about this new marking method. No obligation.

Write for Bulletin B-1

JAS. H. MATTHEWS & CO.
3943 Forbes Street Pittsburgh 13 Pa.
Branch Plants
New York, Boston, Chicago, Philadelphia, Newark, Syracuse
District Sales Offices
Cleveland Detroit Hartford Birmingham

▲ Mention Item NED-5163 when writing ▲



Uniform, Synchronous Speed at Every Station

Electric motors driving the intricate mechanisms of machines that transmit and record messages verbatim must have identical operating characteristics at every station. Since standard "off-the-shelf" motors cannot meet the strict performance requirements, such as uniform, synchronous speed, quietness, load cycles, etc., the solution is a special motor designed to exactly meet the particular operating conditions.

For over 50 years Holtzer-Cabot has designed and built special motors to fit the application. Many machines such as teletype machines, and other sending and receiving equipment are Holtzer-Cabot powered.

Although, today, all of our plant facilities are being utilized for building special fractional H.P. motors for military use, our motor development engineers will gladly discuss your post-war motor requirements with you. No obligation of course.

HOLTZER-CABOT
Division of First Industrial Corporation
Designers and Builders of Special Fractional HP Motors and Electrical Apparatus
125 Amory St., Boston 19, Mass., Chicago, Ill., New York, N.Y., Philadelphia, Pa.

▲ Mention Item NED-5164 when writing ▲

Thermoswitch In HOT WATER

Engineered primarily for use in heaters, boilers, air-conditioning apparatus and where it is necessary to immerse the unit in the medium to be controlled. With protective junction box and enclosed dial, this sensitive Thermoswitch adds to both efficiency and looks of manufactured product or process.

With ±1/10° sensitivity and a range from minus 100° to plus 600° F. the Thermoswitch is today's most efficient heat (and cold) control. Rated 10a. 115v.

Write for new Catalog

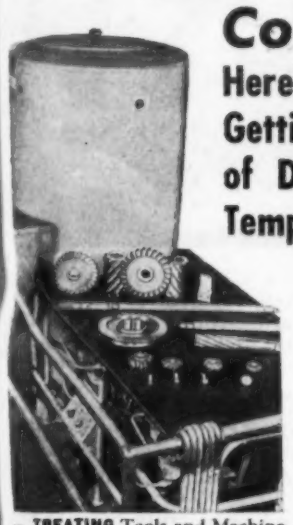
The Immersion Thermoswitch

Fenwal INCORPORATED
10 PLEASANT ST., ASHLAND, MASSACHUSETTS

▲ Mention Item NED-5165 when writing ▲

To the Manufacturer Not Yet Using Cold Treating

Here's How Others Are Getting the Advantages of Deepfreeze Sub-Zero Temperatures . . .



1 TREATING Tools and Machine Parts in a Deepfreeze Cascade −120° F. Industrial Chilling Machine.

2 SHRINK FITTING all types of metal parts for rapid assembly in a Deepfreeze Cascade −120° F. Chilling Machine.

3 STABILIZING gauges and gauge blocks to within .000002" in a Deepfreeze −120° F. Chilling Machine.

4 TESTING of instruments and parts for use at extremely low temperatures in a Deepfreeze Model D-70 Industrial Chilling Machine.

• Deepfreeze Industrial Sub-Zero Chilling Machines are being used daily to harden cutting tools, stabilize gauges, shrink steel parts for assemblies of various types and test aviation parts and instruments. The chances are that you can beneficially put all four of these cold-treating operations to work in your plant. Here are a few of the results being obtained by manufacturers through the use of Deepfreeze sub-zero temperatures—Tool life on high-speed drills increased 500%; life of gauge blocks and lapping flats increased 2000%; $3,675 saved per year by eliminating the dry ice method of shrinking valve insert seats for engine blocks.

How to Pre-determine Your Benefits from Cold Treating... Deepfreeze Engineering Service will inform you without obligation of the benefits you will receive by applying cold treating to your production. Submit the details of your work today.

FREE . . . Latest Cold Treating Facts

A new 40-page booklet has just been published on cold treating and will be sent to you upon request for Bulletin No. I-4.

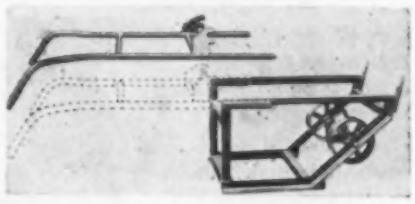
Only Motor Products can make a "Deepfreeze"

Trade-mark DEEPFREEZE Registered United States Patent Office

Deepfreeze | 2316 Davis Street, North Chicago, Illinois
Division of Motor Products Corp. | Detroit, Michigan

▲ Mention Item NED-5166 when writing ▲

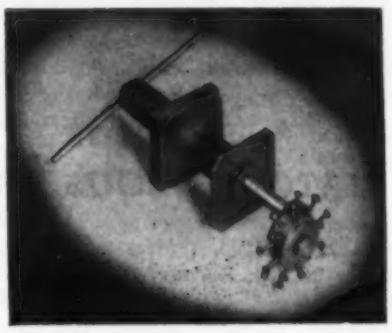
DRUM DRAIN RACK & TRUCK



Detachable handles are feature of this combination truck and drain rack and they may be used to serve any number of units. Handles are easily removed when truck is used as drain rack or as temporary storage rack for steel drums. Units are available with or without handles and are of automatic loading type. Made by **Palmer-Shile Co.**, 7116 West Jefferson Ave., Detroit 17, Mich.

▲ Mention Item NED-5167 when writing ▲

CARBON REMOVING TOOL

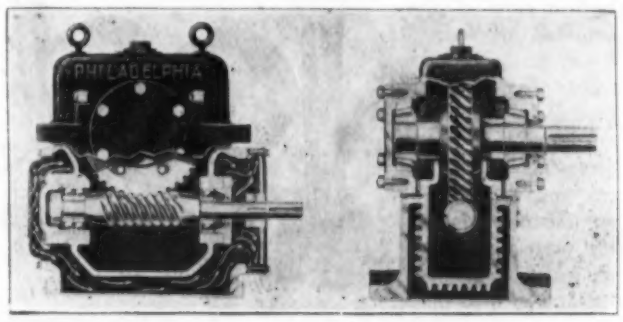


Removal of carbon from air intake ports of GM 2-cycle diesel engines is simple operation with Stuart carbon removal tool. Time savings of up to 3½ hours over normal methods is claimed since ports can be cleaned without removing pistons or pulling cylinder sleeves. Head carries two rows of eight punches each. Four turns of handle operating eccentric cam punches carbon out of all 64 ports in each sleeve. Made by **Stuart Engineering Div.**, 3349 N. Ashland Ave., Chicago 13, Ill.

▲ Mention Item NED-5168 when writing ▲

WORM GEAR SPEED REDUCER

Horsepower ratings of AirKooled worm gear speed reducer are considerably greater than standard heavy duty type unit for worm speeds of 580 to 1750 revolutions per minute. At

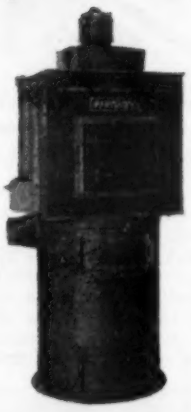


1750 revolutions per minute ratings are approximately doubled at all ratios.

Ratings of standard units at higher speeds are limited due to rise in temperature of oil bath. AirKooled unit dissipates heat by drawing cooling air through double walled ribbed housing with suction fan mounted on worm shaft. At 1750 revolutions per minute, where rating advantage is greatest, this unit will be about two sizes smaller than standard unit of same capacity, resulting in saving in space and approximately 40 per cent reduction in weight. Made by **Philadelphia Gear Works**, 3600 G St., Philadelphia 34, Pa.

▲ Mention Item NED-5169 when writing ▲

Something New IN Dust Control



Here's the new Pangborn "CK" Industrial Type Unit Dust Collector. Developed through extensive research, it is our answer to the need for complete dust control on a specific job by means of a single unit possessing unusual capacity.

Fully described in Bulletin #910. Write for your copy today!

PANGBORN

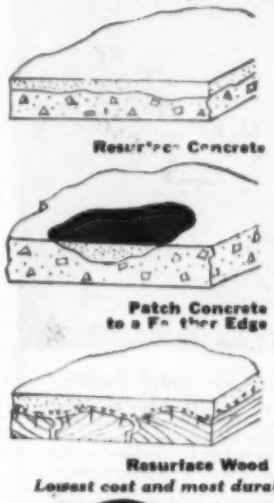
WORLD'S LARGEST MANUFACTURERS OF BLAST CLEANING AND DUST COLLECTING EQUIPMENT
PANGBORN CORPORATION • • HAGERSTOWN, MD.

▲ Mention Item NED-5170 when writing ▲

Use "PERMAFLEX" Resurface and Patch INDUSTRIAL FLOORS

Bonds Perfectly — Never Comes Loose

3000 lbs. pressure per sq. in., will not rut



HEAVY DUTY - DUSTPROOF SLIPPROOF - WATERPROOF RESTFUL — QUIET

Install right over your old Floors, Walks and Drives.

No need to move machinery, finish right up to it. No Chipping. No Dust. No Delay. Install Friday night and Saturday, ready for use on Monday.

Never a failure in over 1,000 installations.

Our Contract Department can do the installation work for you at any rate to 30,000 sq. ft. per day.

AMAZING! UNBELIEVABLE! *Until you try* **"PERMAFLEX"**

Users include U. S. Steel, Bethlehem, Republic, General Motors, A. O. Smith, Western Electric and Leading Railroads.

Lowest cost and most durable industrial flooring ever invented.

Write for 100 sq. ft. trial offer.

INSTALL COMPLETE 12½c per square foot

PERMAFLEX PRODUCTS COMPANY
1848 North Front Street Philadelphia, Pa.

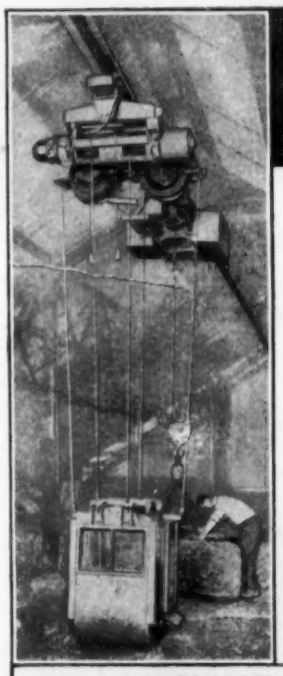
▲ Mention Item NED-5171 when writing ▲

if so . . . you want the NEW LOMBARD COMPACT VARIABLE DRIVE

For close space requirements, this new Lombard Variable Drive is the ideal solution . . . just the size of the motor that drives it. Over 90% of the power goes through the gearing, with only 10% through the V-belt. Write for engineering bulletin.

LOMBARD GOVERNOR CORPORATION
Sales Office • 60 E 42nd St. • New York
ASHLAND • MASSACHUSETTS

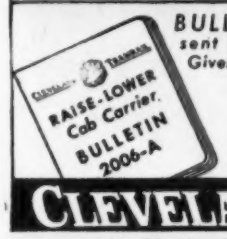
▲ Mention Item NED-5172 when writing ▲



RAISE-LOWER CAB CARRIER

Cuts Handling Costs ½ to ⅔

• Permits one man to handle all operations when moving materials with a cab-controlled overhead system. Operator lowers cab to floor or top of materials when attaching or detaching load on hook. No floor men needed. Carrier will not travel until cab is in high position. All motions motorized.



BULLETIN 2006-A sent free on request. Gives complete details.

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
1143 EAST 283rd ST. WICKLIFFE, OHIO

CLEVELAND TRAMRAIL

▲ Mention Item NED-5173 when writing ▲

C-F POSITIONERS

HANDLE THE BIG JOBS *Easily and Safely*

With C-F Positioners each welder can position even the most cumbersome weldments with a push button control—without crane work or handling crews. He can rotate the weldment a full 360°, rotate it at any speed from 0 R.P.M. up and can tilt it to 135° beyond horizontal . . . can weld all sides, surfaces and angles downhand with a single set-up; with larger rods and fewer passes. All C-F Positioners, both stationary and portable, are pedestal mounted to give maximum floor and working clearance; all are adjustable for height.

Write for Bulletin WP-22

CULLEN-FRIESTEDT CO.
1304 S. Kilbourn Ave. Chicago 23, Ill.

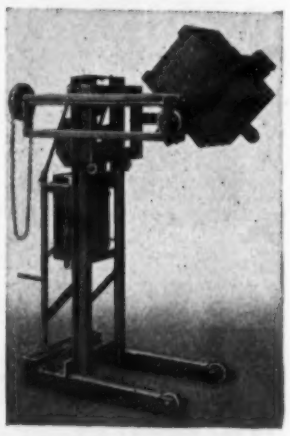
▲ Mention Item NED-5174 when writing ▲

REVOLVATOR ELEVATORS
HYDRAULIC — PORTABLE

Include in your conversion program REVOLVATOR Hydraulic Elevators for easy, economical material moving from floor to floor, for ramp elimination between floors and for press feeding. Safe, quiet, and usually the least expensive type for short lifts.

Use REVOLVATOR Portable Elevators for time, space, and labor saving lifting and piling of merchandise in stock room or warehouse. 27 standard models cover all ordinary requirements. Special machines for unusual services designed and built to order. These include carboy dispensers, barrel and drum tilters, positioning holders for servicing engines and for welding, and skyscrapers for servicing high ceilings.

Send for Bulletin 139 illustrating numerous REVOLVATOR uses.



Revolvator Carboy Dispenser easily and safely raises and pours hazardous acids into vat or tank.

We also make RED GIANT LIFTRUCKS

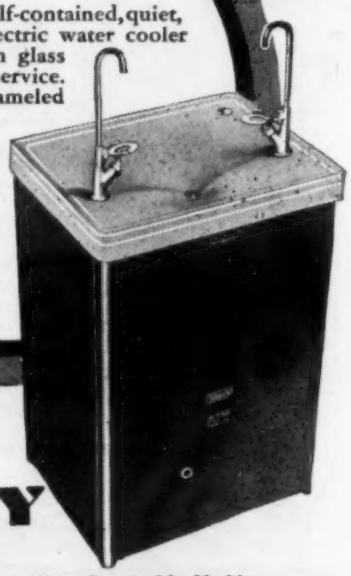
REVOLVATOR CO.
DESIGNERS AND MANUFACTURERS OF MATERIAL HANDLING EQUIPMENT
2032 86th St. NORTH BERGEN, N. J. Since 1904

▲ Mention Item NED-5175 when writing ▲

CORDLEY
Electric
WATER COOLERS

This handsome self-contained, quiet, high-efficiency electric water cooler has two push-down glass fillers to speed up service. White porcelain enameled top, gun metal finish cabinet is sanitary and ratproof. Floor space only 20½ x 26 inches.

Write for Data

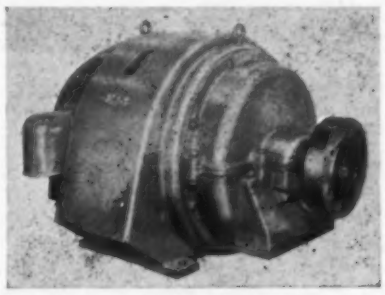


Remember the name

CORDLEY AND HAYES
457 Fourth Ave., New York 16, N. Y.
Specialists on Drinking Water Equipment Since 1889

▲ Mention Item NED-5176 when writing ▲

INDUCTION MOTORS



Adaptable for all types of industrial, power plant, water works and other drives, line of large, heavy duty induction motors ranges in size from 200 to 1000 horsepower which are available in squirrel cage and wound rotor models. Special electrical and mechanical modifications can be supplied to meet specific power and motor application conditions.

Directed, smooth flow ventilation for cool motor operation is provided by rotor fan and conical baffling. Large motor shaft is accurately machined and finished. One-to-one ratio sleeve bearings are standard. Ball or roller bearings can be supplied. Made by **Electric Machinery Mfg. Co.**, 1335 Tyler St., N. E., Minneapolis 13, Minn.

▲ Mention Item NED-5177 when writing ▲

DIATOMACEOUS EARTH FILTER

Adaptable to any type of chemical, industrial or food plant filtration operations, Ideal diatomaceous earth filter features screen grid construction which affords maximum flow and uniformity of product. Discharge manifold is claimed to eliminate clogging, simplify cleaning and assure sanitary operation. Automatic filteraid obviates handling difficulties. Because entire filter system is closed from pump section to discharge, there is no leakage. Steel tank is polished, fittings are bright chrome plated and trim is in black enamel. Sizes range from 24 to 36 inches. Made by **Klein Filter & Mfg. Co.**, 1227 School St., Chicago, Ill.

▲ Mention Item NED-5178 when writing ▲

GAS PROPORTIONER

Producing accurately proportioned mixture of gases at pressure not in excess of 5 pounds per square inch, Airco gas proportioner is of use to electronic tube manufacturers, heat treaters and others who use mixtures of gases for protective atmospheres. Device consists of mixing block incorporating accurately sized orifices and on which are mounted flowmeter, pressure gages and needle valves for gases as well as inlet and outlet nipples.

Unit can be furnished with any two of six available flowmeters permitting wide variation in proportions of two gases to be mixed. Flowmeters for hydrogen service cover range from approximately 2 to 200 cubic feet per hour and for nitrogen range is from approximately 6 to 140 cubic feet per hour. Gases should be supplied through two stage regulators capable of delivering required volume at pressures from 10 to 25 pounds. Made by **Air Reduction Sales Co.**, 60 East Forty-second St., New York 17, N. Y.

▲ Mention Item NED-5179 when writing ▲

SARAN

TO END ALL CORROSION PROBLEMS

Saran is a tough thermoplastic originally made to replace such strategic war materials as aluminum, stainless steel, nickel, copper, brass, tin and rubber. Now found adaptable to a wide range of uses in product designing, food processing and wherever non-corrosive materials are necessary. Its insulating qualities, flexibility and ease of handling make it extremely valuable in installations dealing with oils, gases, air, water and corrosive chemicals. It is available in tube, pipe, sheet, rod and molded fittings.

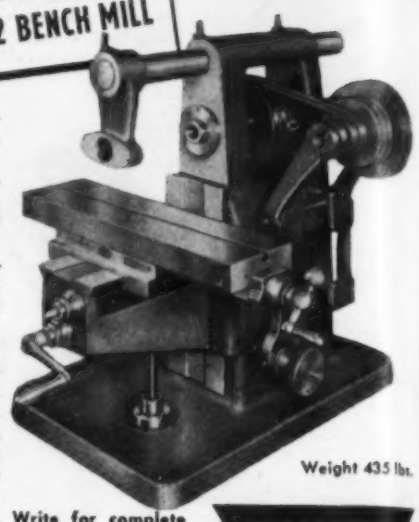
Technical Bulletin P-8 will be sent on request. Address Dept. FK
Pat. No. 2160931

HODGMAN RUBBER CO.
FRAMINGHAM, MASS.
NEW YORK . . . 261 Fifth Avenue
CHICAGO . . . 412 South Wells St.
SAN FRANCISCO . . . 121 Second St.

▲ Mention Item NED-5180 when writing ▲

America's biggest, heaviest bench mill for only $350.00

Diamond MODEL B-12 BENCH MILL



- Spindle speeds approximately 100-1400 r.p.m.
- Recommended motor size, 1-1½ h.p.
- 12" longitudinal table travel.
- 9" vertical clearance between spindle center and table.
- Full line of accessories: power table feed, vertical head, coolant system, etc.

DIAMOND MODEL B-12 gives maximum capacity and power per dollar expended. Available on M.R.O. Write for complete specifications.

Weight 435 lbs.

DIAMOND TOOL COMPANY
3424 East Olympic Blvd., Los Angeles 23, Calif.

DIAMOND DTCo

Manufacturers of the DIAMOND Line of Precision Milling Machines and Accessories

▲ Mention Item NED-5181 when writing ▲

• Pump and motor, a single balanced unit—that's the secret of quiet operation, higher efficiency, longer life—in Worthington MONOBLOC Centrifugal Pumps.

ENDS ALIGNMENT WORRIES

Balanced design prevents shaft distortion . . . saves bearings. No separate distance piece is required between pump and motor. Alignment is perfect and permanent.

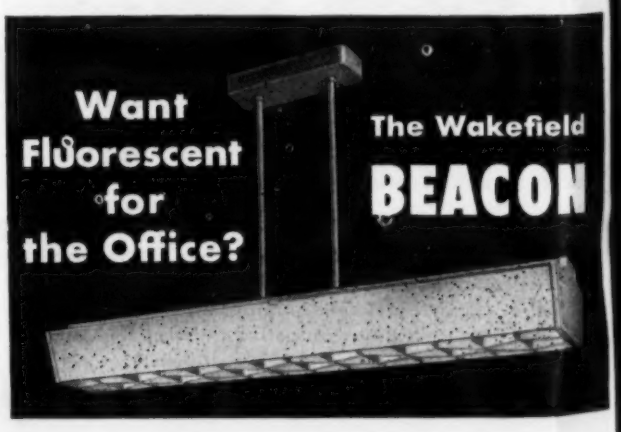
Here's the first complete line of truly balanced centrifugal pump-and-motor units—from ¼ hp. to 60 hp. Investigate Bulletin W-321-B14.

WORTHINGTON *BEHIND THE NAME*

CP4-33

WORTHINGTON PUMP AND MACHINERY CORPORATION
Standard Products Division, Harrison, N. J.

▲ Mention Item NED-5182 when writing ▲



Effective for Drafting Room, too

DESIGNED for high quality fluorescent lighting at lower cost, the BEACON is a "honey" for lighting essential offices or drafting rooms. Provides smooth, shadowless light to help handle paper work faster and reduce eyestrain. Maintenance is especially easy, with no horizontal surfaces on which dust can collect. New rigid design louvres hinged to make lamp replacement simple. Ask your Graybar house for details or write us.

HELP PREVENT INDUSTRIAL ACCIDENTS . . . GUARD MOVING PARTS . . . HAVE GOOD LIGHT . . . BE ALERT

THE F. W. **Wakefield** BRASS COMPANY
RED SPOT LIGHTING FOR WAR PRODUCTION . . . FOR PEACETIME FUTURE
VERMILION, OHIO

▲ Mention Item NED-5183 when writing ▲

DUSTKOPS **STOP DUST** for ALL Abrasive Operations

Entirely Self-contained. Motor, fan, cyclone separator and filter. Fast installation. Flexible metal hose permits installation complete in minutes.

Compact and Portable. Even the biggest DUSTKOPS will usually fit in the existing space behind or beside the grinder.

Send now for complete information. To save time, describe the source of the dust when you write.

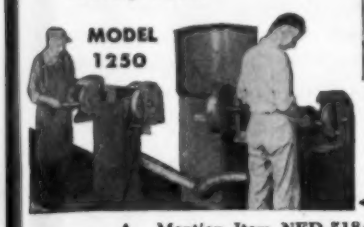
AGET-DETROIT CO.
603 First National Bldg., Ann Arbor, Mich.
Detroit Office: CAdillac 3090—Zone 26

"READY TO GO" this model is for medium duty work of all kinds.

Ideal for light duty production surface grinding.

For smallest grinders, laboratory work.

Handles all the dust from this armor grinding job easily.



Four wheels exhaust into a single Model 1250 that gets all the dust.

▲ Mention Item NED-5184 when writing ▲

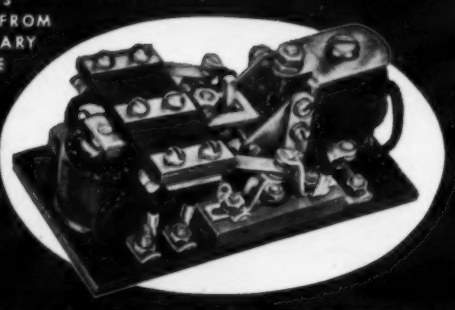
Free — Send for it Today!

You'll be sure to order the right V-belt, the correct speed changing device for your drives after reading Allis-Chalmers' interesting new illustrated booklet describing the world's most complete line of V-belt drive equipment. Write for a copy of B6331 now!
ALLIS-CHALMERS, MILWAUKEE 1, WISCONSIN

A 1765 1

▲ Mention Item NED-5185 when writing ▲

OPERATES POSITIVELY FROM A MOMENTARY IMPULSE



A SMALL "MEMORY-TYPE" RELAY *with* **R-F INSULATION**

This new Struthers-Dunn 50XBX "Memory" Relay is of two-coil, latch-type construction, having radio frequency insulation on its double-pole, double-throw main contacts. These contacts operate immediately upon receipt of a momentary impulse.

The coils are practically universal.

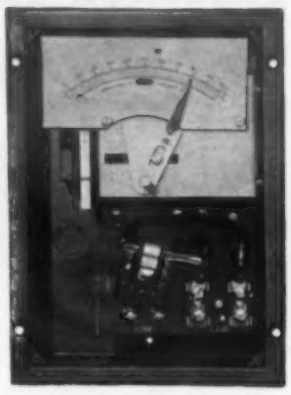
Struthers-Dunn Type 50XBX "Memory" Relays will operate in any position, are shock-proof to 10 G's.

STRUTHERS-DUNN, INC., 1321 ARCH ST., PHILADELPHIA 7, PA.

STRUTHERS-DUNN
5,288 RELAY TYPES

▲ Mention Item NED-5186 when writing ▲

CONTROL INSTRUMENTS



Illustrated instrument is one of series of three devices designed for industrial control applications. Imputrol, not shown, is one of two units developed to control input of power, heat or flow of liquids or gases to any processed equipment. Third unit is Throttltrol which is designed to correct variations in heat requirements of furnaces and process equipment by positioning valve in fuel line. Rheotrol, illustrated, is manually operated controller which regulates input to electrically operated furnaces, ovens, heaters and kilns. This unit is offered in flush-mounted case. It provides stepless control of current supply and replaces standard rheostat. Improved operating efficiency is claimed because of elimination of current waste through resistors. Any temperature in equipment's range is immediately available to operator. Made by **Wheelco Instruments Co.**, 829 W. Harrison St., Chicago 7, Ill.

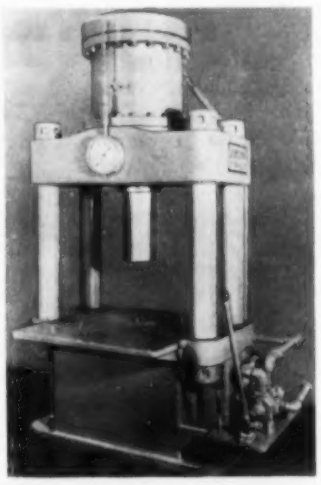
▲ Mention Item NED-5187 when writing ▲

FILM ON TOOLING

Covering many problems encountered in tool room and in mass production, motion picture entitled, "Tooling for Better Internal Grinding" is in 16-millimeter Kodachrome. It shows importance of universal tooling for small lot production, standard tooling adapted to production work and special tooling to enable combining several operations in one chucking. It also shows both plunge and traverse methods of irregular contour grinding. Length of film is 1600 feet supplied on single film reel. Silent projectors cannot be used. It is available to engineering societies and training groups without charge. Issued by **Bryant Chucking Grinder Co.**, Springfield, Vt.

▲ Mention Item NED-5188 when writing ▲

HYDRAULIC PRESS



Heavy forcing and forming operations are performed with this four-poster tie-rod type hydraulic press. It has maximum ram opening of 30 inches, 15-inch stroke and is adjustable to wide variety of operations. Special platen extension is provided to facilitate loading and unloading. Dual volume hydraulic pump provides low pressure operation during non-forcing portion of operating cycle and high pressure application during actual forcing portion of cycle. Change over from one to other is accomplished automatically as demanded by resistance to ram. Proportional pressure valve permits gradual application of pressing force in any degree from zero to full capacity. Made by **Logansport Machine Inc.**, 1935 Payson Rd., Logansport, Ind.

▲ Mention Item NED-5189 when writing ▲

ALL SET FOR DIRTY WORK!

TASGON

Loosens rusty nuts, bolts, couplings, fittings that are corroded or stuck.

In a matter of seconds Tasgon cuts its way through rust and gummed-up dirt—removes tar, paint, and hardened oil—cleans tools, valves, and machines. Its exclusive principle of *colloidal penetration* is the reason why it's the most effective, fastest-working rust solvent on the market.

USE TASGON to make hard jobs easy—save your time and energy. At leading mill supply houses or send 10c for sample can.

Samuel Cabot, Inc.
1420 Oliver Building · Boston, Mass.

▲ Mention Item NED-5190 when writing ▲

DINGS MAGNETIC DRUMS

FOR: PURIFICATION
SEPARATION
PROTECTION OF EQUIPMENT

Dings Magnetic Drums and Drum Type Separators for removing contaminating iron from dry materials are completely automatic, simple and fit in ideally where space is limited. Capacities range from 600 cu. ft. per hour to over 12000 cu. ft. per hour. Standard drum sizes range from 12¼" dia. x 8" length to 30¼" dia. x 48" length. Drums may be installed at the bottom of chutes, at the ends of conveyors, under hoppers, etc. Drums fully enclosed in housings and equipped with hoppers are available.

Complete data, diagrams, capacities, etc. in CATALOG 660. WRITE TODAY FOR A COPY.

Dings Magnetic Separator Co.
520 E. Smith St.
MILWAUKEE 7, WISCONSIN

▲ Mention Item NED-5191 when writing ▲

FOG { for cooling, confining, quenching oil fires
SOLID STREAM { for deep-seated fires from this same nozzle

Rockwood's SG-40 Nozzle, for attachment to regular fire hose lines. A quick movement of the handle changes discharge from WaterFOG (water particles much finer than spray, with high heat absorptive property) to solid stream.

WaterFOG is effective on oil fires because it cools faster . . . drifts over the liquid longer (no splashing) . . . retards vaporization . . . and, becoming steam, shuts off oxygen.

Moving the handle causes a solid stream to be discharged over a long distance. The SG-40 Nozzle comes in 1", 1½" and 2½" sizes.

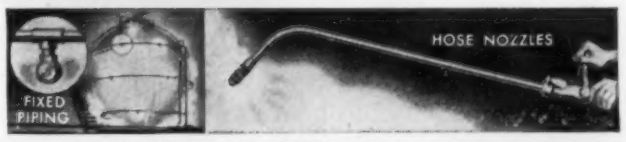
With FOG Tip removed, and extension applicator attached, it discharges low velocity WaterFOG in ball shaped pattern creating protective shield between operator and fire. 6' applicator fits 1" nozzle; 4' and 10' applicators fit 1½" nozzle; 12' applicator fits 2½" nozzle.

FREE Bulletin 123, gives complete information on Rockwood WaterFOG equipment.

ROCKWOOD SPRINKLER CO., 44 Harlow St., Worcester 5, Mass.
Specialists in Fire Protection Engineering, Equipment and Installation since 1907

ROCKWOOD WaterFOG

Water Engineered by Rockwood Cools. Confines. Smothers Oil Fires



▲ Mention Item NED-5192 when writing ▲

New INDICATING FLUXMETER

For Measuring Magnetic Flux or Flux Density

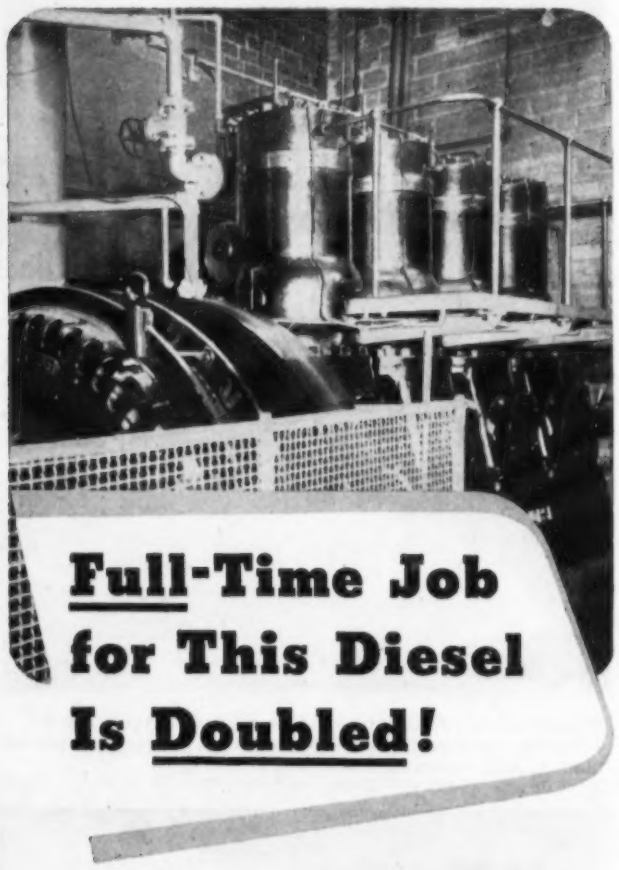
COMPACT—This fluxmeter is a self-contained unit; no separate lamp stand or scale is needed. Controls—conveniently located—can be operated without disturbing the instrument. Inexperienced personnel can use it.

ACCURATE—An accuracy of ±1 per cent is obtainable by following a simple calibration procedure. Long scale (50-0-250 millimeters). Well adapted to measuring low values of flux.

APPLICATIONS—Wherever apparatus involving permanent magnets or d-c electromagnets is manufactured. For example: communication apparatus, motors, contactors, electric measuring instruments. Write today for Bulletin GEA-4157A. *General Electric Company, Schenectady 5, N. Y.*

GENERAL ELECTRIC

▲ Mention Item NED-5193 when writing ▲



Full-Time Job for This Diesel Is Doubled!

In 1938 the Superior Packing Company installed this single, 300-hp. Fairbanks-Morse Diesel in their Minneapolis plant.

- ★ In the first 3 years it turned out sufficient power to kill, dress and refrigerate over *a quarter million* head of cattle.
- ★ Average working day production made it a *full-time* Diesel job in 1941.
- ★ Today that production is *doubled.* Yet this same sturdy, dependable, Fairbanks-Morse Diesel continues to furnish *all* the electric power.
- ★ What's more—Diesel operation has resulted in consistent, year after year savings which have more than paid off the entire cost of the equipment.

If you need more power—low-cost power—write Fairbanks, Morse & Co. and let our Engineering Department study your needs. There is no obligation. Fairbanks, Morse & Co., Fairbanks-Morse Building, Chicago 5, Illinois.

BUY WAR BONDS

FAIRBANKS-MORSE

DIESEL ENGINES · PUMPS · MOTORS · GENERATORS · WATER SYSTEMS · SCALES · STOKERS · FARM EQUIPMENT · RAILROAD EQUIPMENT

Diesels

▲ Mention Item NED-5194 when writing ▲

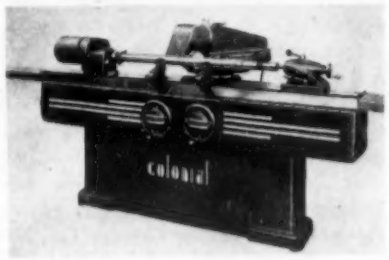
PRECISION COMPARATOR

Wide range of magnification of this line of DoALL comparators enables single unit to perform work normally requiring four standard comparators. Four magnification ranges are available in each device and are from 100 up to 100,000 times. All units operate on 110-volt, 60-cycle alternating current.

Spindle has variable pressure adjustment to provide for thick or thin sections, or hard or soft materials. Spindle movement is magnified electrically to assure exact repeat readings. Gage head swivels through full circle in horizontal and vertical planes for checking irregular parts. Protractor shows angle to which head is tilted. Head can be removed from stand and used for special applications. Electrical circuit minimizes expansion caused by temperature changes and drifts due to line voltage fluctuations. Made by **Continental Machines, Inc.**, 1314 Washington Ave. S., Minneapolis 4, Minn.

▲ Mention Item NED-5195 when writing ▲

BROACH SHARPENER



Practically any type of broach can be sharpened with this model C2S broach sharpener which was designed with consideration for women operators and for increased sizes of broaches in use. Round, flat, spline and serrated or other types are handled from smallest sizes up to 7 feet long and with maximum diameter of 6 inches or 8-inch flat types.

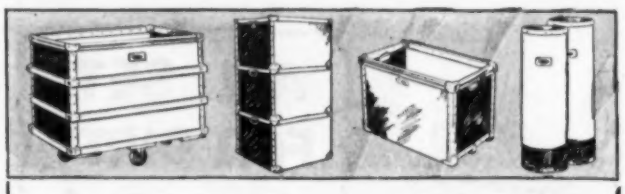
Lightweight alloy is used in construction of head which is supported and guided by double-row roller bearings, affording ease of operation. All bearings are sealed against entry of grinding dust.

Dual ratio micrometer handwheels, available at slightly extra cost, make possible maintaining of identical steps per tooth in regrinding operations. Another feature available at added cost is special roller curtain design for protecting ways of machine when table is moved to one side or other. Metal guards are provided for this purpose on standard machines.

Changeover from sharpening round to flat broaches is accomplished without special tools and with minimum of adjustments. Universal positioning and movement of grinding wheel are obtained by use of vertical column, cross slide mounted on graduated support and graduated wheel head mounting. Reduction gearing provides spindle speeds of 200 and 400 revolutions per minute for cylindrical broach sharpening headstocks.

Adjustable stops, coil spring cushioned, are provided on broach head cross slide. Model can be supplied without head and tailstocks and steady rests for sharpening flat broaches only. Magnetic chucks for grinding flat broaches are available as extra equipment. Made by **Colonial Broach Co.**, Box 37, Harper Sta., Detroit 13, Mich.

▲ Mention Item NED-5196 when writing ▲



DIAMOND *Vulcanized* FIBRE

TRUCKS • BARRELS • BOXES
BASKETS • TRAYS
ROVING CANS

No Splinters . . .
No flared ragged edges
No rust . . .

EASY TO CLEAN • LIGHT IN WEIGHT

SEND FOR CATALOG HW30
GIVES COMPLETE DATA ON SIZES
CONSTRUCTION AND DESIGNS

C-D DIAMOND FIBRE HOLLOW WARE
CONTINENTAL-DIAMOND FIBRE CO. NEWARK, DEL.

▲ Mention Item NED-5197 when writing ▲

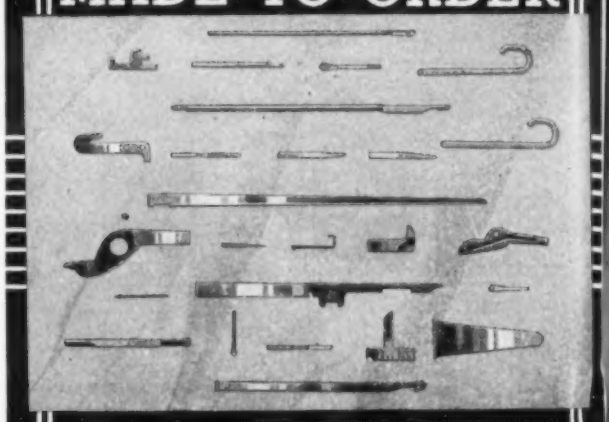
Colson *Time-saving* MATERIALS-HANDLING EQUIPMENT

THE quick handling of materials and finished products in factories, on loading platforms and docks, saves money and manpower. Colson hand trucks, barrel and drum trucks, bag trucks, and dollies are built to meet requirements of varied industries. Colson lift-jack systems—a semi-live skid and two-wheeled jack—provide economical handling at low equipment cost. In addition to this wide line of trucks, Colson manufactures hundreds of types and sizes of casters. If you have a materials-handling problem, write us.

THE COLSON CORPORATION
ELYRIA, OHIO
CASTERS · INDUSTRIAL TRUCKS AND PLATFORMS · LIFT JACK SYSTEMS · BICYCLES · CHILDREN'S VEHICLES · WHEEL CHAIRS · WHEEL STRETCHERS · INHALATORS · TRAY TRUCKS · DISH TRUCKS · INSTRUMENT TABLES

▲ Mention Item NED-5198 when writing ▲

MADE TO ORDER



For special flat metal or odd shaped parts as shown, we maintain a special department where such parts are built to your specifications.

Pressed and sheared to exact dimensions, with smooth edges. Odd shaped parts reproduced faithfully from sample or sketch.

Special equipment and 72 years of experience assure satisfaction.

The Torrington Company
SPECIALTY DEP'T.
Torrington, Conn., U.S.A.

▲ Mention Item NED-5199 when writing ▲

AEROQUIP SELF SEALING COUPLINGS AND HOSE LINES WITH DETACHABLE FITTINGS ARE STANDARD ON ALL ARMY AND NAVY AIRCRAFT.

AEROQUIP CORPORATION
JACKSON, MICHIGAN, U. S. A.

303 WAREHAM BLDG., HAGERSTOWN, MD. • 1709 W. 8th, LOS ANGELES • PRINCE—72 STAFFORD ST., TORONTO, ONT. LICENSEE: WAGNER ELECTRIC CORPORATION • 6400 PLYMOUTH AVENUE, ST. LOUIS 14, MISSOURI

▲ Mention Item NED-5200 when writing ▲

29-inch diameter Magnet on truck crane receives 36-volt power directly from truck.

● These mobile units handle plant materials quickly and at little cost, such as lifting castings and forgings from floor to machine, moving products in and out of boxcars, and other similar lifting and moving jobs about the plant. They are also used in some plants to keep the floors clean from tire-injuring scrap.

EC&M Circular Magnets come in ten sizes for all industrial needs. Ask for Bulletin 900.

THE ELECTRIC CONTROLLER & MFG. CO.
2698 East 79th Street Cleveland 4, Ohio

▲ Mention Item NED-5201 when writing ▲

BENCH CENTERS

Accuracy within limits of 0.0001 inch in checking for runout can be maintained on this improved bench center. Only one hand is required for operating all movable elements. Center in left hand head is fixed, but that in right hand head is spring loaded and can be retracted by end bar for quick loading and unloading. Center is locked in position during checking by front clamp. Indicator support is manipulated by one hand when moving it to and from work. Center holes of both heads are bored together to assure alignment. Available sizes are 6 x 18, 6 x 36, 12x 36, 12 x 48, 12 x 60, and 12 x 72 inches. Dial indicator with adjustable holder is extra equipment. Made by **Sundstrand Machine Tool Co.**, 2574 Eleventh St., Rockford, Ill.

▲ Mention Item NED-5204 when writing ▲

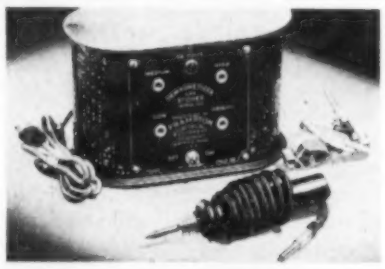
FLUSH RIVETING SET

Consisting of head, shank and rubber retainer, this swivel-type flush riveting set is designed for high speed work on irregular or slightly curved surfaces where it is difficult to hold set square to riveted surface. Simplified design insures easy maintenance and long use. Set can be assembled or disassembled easily by hand.

Swivel action allows riveting from various angles up to 20 degrees, while protective rubber cover prevents skidding or danger of surface marring. Ample face surface and high polish assures smooth skin finish. Sets have 1¼-inch face with overall length of 3 inches and are available with either 0.401 or 0.498-inch shank. Made by **Emerson Engineering Co.**, 1418 S. Flower St., Los Angeles 15, Calif.

▲ Mention Item NED-5205 when writing ▲

DEMAGNETIZER & ETCHER



Compact, sturdy and portable, this demagnetizer and etcher will demagnetize any size tool or die. Parts to be demagnetized are simply passed across poles or, if they are large and heavy, demagnetizer is moved across their surfaces. Etching is performed by plugging etching pencil into one of three jacks marked low, medium and high, depending on wattage to be used. Unit weighs 16 pounds and is designed for use with 110-volt, 60-cycle, single phase circuit. Made by **Frampton Electrical Equipment Co.**, 216 Hickory St., Dayton 10, O.

▲ Mention Item NED-5206 when writing ▲

AMPLICALL

MULTIPLIES MANPOWER

Getting things done faster with *AMPLICALL* Paging and Two-Way Communications System means a saving of man-hours daily . . . actually *multiplies your manpower!* That fact is being convincingly demonstrated each day in the thousands of small and large plants where *AMPLICALL's* multiple uses and dependable high quality are doing a stand-out job. *AMPLICALL* systems are flexibly designed to meet specific needs—get the full efficiency story of this streamlined electronic communications system now.

BACK THE ATTACK Rauland BUY MORE WAR BONDS

RADIO · RADAR · SOUND · COMMUNICATIONS · TELEVISION
THE RAULAND CORPORATION • CHICAGO 41, ILL.

▲ Mention Item NED-5208 when writing ▲

COOLANT PUMPS — "FULFLO" TRADE MARK REG. U. S. PAT. OFF. — BY-PASS VALVES

Precision Engineered

Built with utmost adherence to most rigid specifications . . . precision designed, built and inspected to insure exact performance. Countless tests prove the superiority of FULFLO PRODUCTS.

Model AG 3M

FULFLO CENTRIFUGAL COOLANT PUMPS

Standard and special models . . . every one the result of experience in designing the best type for each purpose. Pipe size 3/8" ball-bearing motors.

FULFLO BY-PASS OIL-RELIEF VALVES

NON-CHATTERING . . . no maintenance after installation; five different springs for pressure variations; Standard or flange models. Cast iron or brass bodies; brass, hardened or stainless steel pistons.

Write for Fulflo Mechanical Data Book

THE FULFLO Specialties Co., Inc.
BLANCHESTER, OHIO

▲ Mention Item NED-5202 when writing ▲

Why Drive with your ... Why ... with a
(It's Out of Date-Slow-Expensive)

Let the HANSEN one-hand TACKER Do your Tacking and Fastening

MODERN methods mean much—in saving time and producing more! The HANSEN one-hand TACKER saves time by doing tacking, fastening and assembling—fast as the hand can grip

Airplane and other essential industries have adopted the HANSEN TACKER and find that it increases production speed. It drives into hard wood, thru thin metal or tin. Drives two pointed Tackpoints or T-head Tacks up to ½" length.

Write for details! SEND FOR FOLDER

HANSEN TACKERS STAPLES A.L. HANSEN MFG. CO.
5164 RAVENSWOOD AVE., CHICAGO, ILL.

▲ Mention Item NED-5203 when writing ▲

CRESCENT

Ability to Manufacture WIRES AND CABLES is the result of over 50 years' experience

CRESCENT INSULATED WIRE & CABLE CO.
Trenton, N. J.

▲ Mention Item NED-5207 when writing ▲

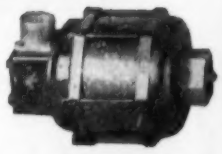
OVER-SPEED PROTECTION

for . . .

INTERNAL COMBUSTION ENGINES
DYNAMOMETERS
TURBINES
GRINDING WHEEL TEST

CONTROL UNIT

OVER-SPEED CUTOUT AND 6" SG TACHOMETER MODEL SG 6" RT



GENERATOR

For limiting speed, or operating controls at predetermined speeds on rotating equipment . . .

A combination of an accurate electrical drive 6" dial tachometer and adjustable over-speed cutout.

Cutout closes or opens an electrical circuit (or circuits) at a preselected speed. After tripping it must be manually reset before circuit can be restored.

Accuracy: Tachometer ± 10 RPM for range 200 – 3500
Cutout ± 50 RPM for range 2000 – 3500

Adjustment: Cutout speeds selected on dial graduated each 100 RPM

Cutout can be mounted within chrono-tachometer case or as separate unit as desired.

Write NED – 24

THE STANDARD ELECTRIC TIME CO.
"Split-Second Measurement by Standard"
SPRINGFIELD 2, MASSACHUSETTS

▲ Mention Item NED-5209 when writing ▲

Now! ALL STEEL Fluorescent Units

Wheeler SKILLED LIGHTING is back in production of the *all-steel* Fluorescent Unit! This highly developed product of wartime research – backed by 63 years of lighting experience – is available now to help increase output and reduce accidents by giving *maximum* visual aid to workers.

Open-End *all-steel* Fluorescent Units are available for two 40-watt, three 40-watt or two 100-watt lamps. Broad metal wiring channel, with easily-accessible, enclosed ballast. Can be mounted from chain or conduit, in individual or continuous runs. Messenger Cable, Rod, or Close-to-ceiling Suspension Fittings.

Write for full details on the complete line of fluorescent and incandescent fixtures made by **Wheeler Reflector Company, 275 Congress Street, Boston 10, Mass.** ... New York, N. Y. Representatives in principal cities.

Distributed Exclusively Through Electrical Wholesalers

Wheeler REFLECTOR COMPANY
Lighting Equipment Specialists Since 1881

▲ Mention Item NED-5210 when writing ▲

THE TOOL THAT REPLACES THE TORCH

IT'S the Burndy HYTOOL . . . the easy-to-use indenting pliers which *indent* Burndy HYDENT connectors to wires merely by closing the jaws. It makes a small wire electrical connection quicker, *surer and stronger*, than by any other method.

Burndy HYDENT connectors, are *one-piece, pure copper* connectors. Thus, when firmly indented to wires with the HYTOOL, they provide connections of *maximum conductivity*, that are *on to stay!*

For electrical maintenance, as well as in manufacture, you can *lower installation and servicing costs*, and *improve circuit efficiency*, by using the HYTOOL instead of the torch. Why not send for the new HYDENT catalog, today?

Burndy HYDENT Connectors are available for all wire and cable sizes from #30 to 2500 mcm . . . and in types for all connection problems.

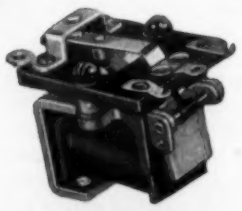
Headquarters for CONNECTORS

Burndy

BURNDY ENGINEERING CO., INC.
107 EASTERN BOULEVARD, NEW YORK 54, N. Y.

▲ Mention Item NED-5211 when writing ▲

New MIDGET RELAY by GUARDIAN



Series **295** for D. C. only

Size: 1 9/32" x 1 5/32" x 29/32"

★ You will find this lightweight miniature relay excellent for applications where space is at a premium and where weight is an important consideration.

For D.C. only. Switch capacity: double pole, double throw with 1.5 amp. contacts. Normal power requirements 1.75 watts. Small in size as indicated above. Weight: 1.2 oz. single pole, single throw.

Bulletin No. 295 gives further details

WRITE

GUARDIAN ELECTRIC
1626-K W. WALNUT STREET CHICAGO 12, ILLINOIS
A COMPLETE LINE OF RELAYS SERVING AMERICAN WAR INDUSTRY

▲ Mention Item NED-5212 when writing ▲

SUMP TANK CLEANER

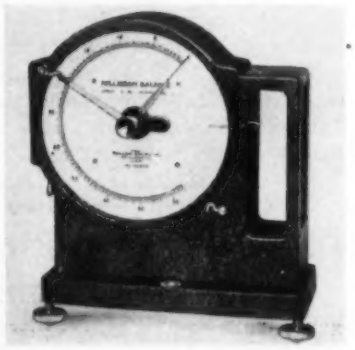
Capable of removing sludge, chips, old oil and coolants from sumps on grinders, lathes, screw machines and other machine tools with minimum of effort, model 20-T sump tank cleaning machine is operated by one man. Mounted on easy rolling wheels for portability, it can be wheeled anywhere in shop and plugged into nearest electric power outlet. All sludge, chips and foreign matter are separated from removed oil by filter.

Rotary vacuum pump, driven by ¼-horsepower motor, creates vacuum in large tank. This vacuum affords strong suction on hose which is placed in sump tank. Dirty oil is drawn into filter chamber and cleaned oil collects in tank. Float control shuts off unit and flashes pilot light when tank is filled. Sludge basket is easily removed for emptying and tank is drained from bottom. Connection on vacuum pump can be reversed to give pressure discharge through 1¼-inch gate valve and discharge hose. Since only air passes through pump, excessive wear and clogging are eliminated.

Tank capacities of 100 and 150 gallons are available. All welded construction is used. Standard equipment includes 20 feet of 1¼-inch Neoprene oil resistant suction hose and one 4-inch cleaning nozzle. Made by **W. R. Carnes Co.**, 2066 Helena St., Madison 4, Wis.

▲ Mention Item NED-5213 when writing ▲

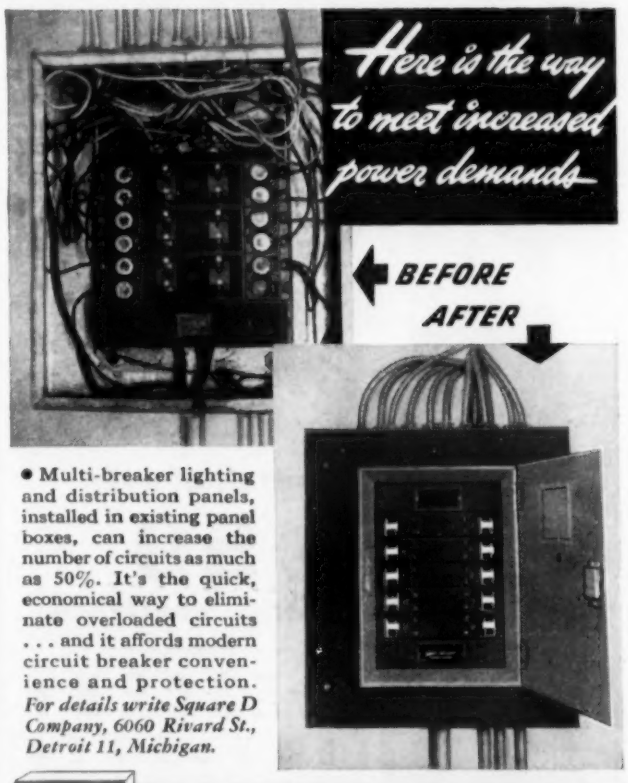
PRECISION BALANCES



Improvements incorporated in line of single and double hook precision balances speed up weighing of such materials as lamp filaments, small mechanical parts, small quantities of chemicals or granular substances such as gunpowder charges, precious ores and powders. Magnetic damper is new feature which brings balance to rest quickly without affecting accuracy. Another improvement is simplification of readings by use of anti-parallax pointer and hand drawn scale in plane of vernier pointer and printed scale with mirror. These improved models have **guaranteed accuracy** of 0.2 per cent of full scale value. They can be furnished in wide selection of scale ranges from 0-3 to 0-2000 miligrams, 0-3 grams to 0-50 grams and 0-10 to 0-1000 grains.

Operation is simple. With weighing beam loaded, index pointer is rotated until beam is lifted and parallax pointer indicates zero. Index pointer then indicates on dial weight of material. Reading is obtained directly from dial in milligrams or other units for which balance is calibrated. Made by **Roller-Smith Co.**, 1766-A W. Market St., Bethlehem, Pa.

▲ Mention Item NED-5214 when writing ▲



• Multi-breaker lighting and distribution panels, installed in existing panel boxes, can increase the number of circuits as much as 50%. It's the quick, economical way to eliminate overloaded circuits . . . and it affords modern circuit breaker convenience and protection. *For details write Square D Company, 6060 Rivard St., Detroit 11, Michigan.*

SQUARE D COMPANY
DETROIT • MILWAUKEE • LOS ANGELES

▲ Mention Item NED-5215 when writing ▲

HOW REMOVABLE STICKERS INCREASE WAR PRODUCTION

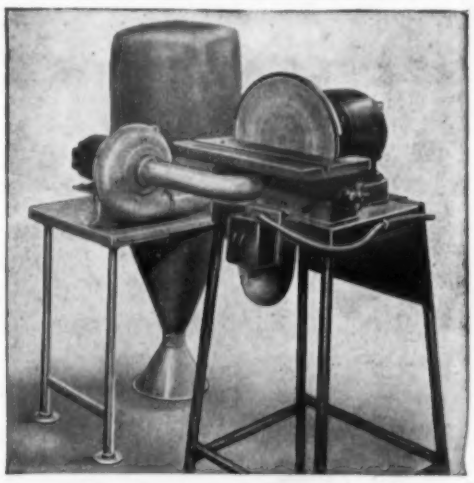
Learn more about these amazing peelable production stickers that are applied without moistening, stick to any smooth surface, yet are easily removed when their work is done. The booklet shows their many time-saving uses at Douglas, Bendix, Consolidated, Buick, Pratt and Whitney, Briggs, General Electric, U S. Signal Corps, Allis Chalmers, etc. Write Dept. NED-9.

Write for Folder Showing Many Proven Uses of These Amazing Stickers

AVERY
Kum-Kleen
PRODUCTION STICKERS
AVERY ADHESIVES: 451 E. 3rd St., Los Angeles 13
New York • Boston • Detroit • Pittsburgh • Chicago
Kansas City, Mo. • In Canada: Enterprise Sales, Toronto

▲ Mention Item NED-5216 when writing ▲

Rid Your Sanding Wheel of Dust



STOP DUST BREATHING • TO PREVENT ILLNESS!

LEIMAN BROS. NEW UNIT DUST COLLECTORS

Made in a number of sizes—one for each of your machines.

Surface Grinder, Saw, Belt Sander, Double End Grinder, Flat Grinder

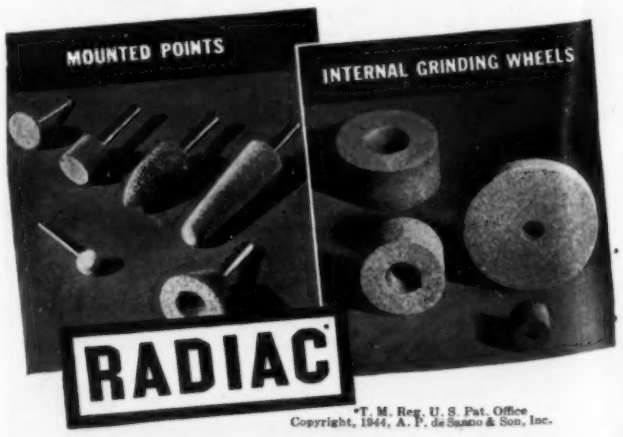
The very finest dust particles—too fine to be seen by the naked eye—are the really dangerous ones—dangerous to your health and dangerous to the parts of a finely adjusted machine.

LEIMAN BROS. 167 CHRISTIE ST. NEWARK, N. J.

▲ Mention Item NED-5217 when writing ▲

RECORDED "PRESCRIPTIONS" PROTECT YOU

No question about getting the right Radiac Wheel for your job. Each Radiac wheel is "prescription fitted" for your purpose and custom-compounded. Each "prescription" is carefully recorded for your protection, so repeat orders can be exactly duplicated. Radiac is right . . . and right every time. All mounted points and wheels are 100% tested—produced by pioneers in the industry. For fast stock removal, long life, cool-cutting —use Radiac!



*T. M. Reg. U. S. Pat. Office
Copyright, 1944, A. P. de Sanno & Son, Inc.

A. P. DE SANNO & SON, INC., 446 Wheatland St., Phoenixville, Pa.
SINCE 1893
New York • Chicago • Pittsburgh • Cleveland • Detroit • Los Angeles

▲ Mention Item NED-5218 when writing ▲

Oxweld

Oxy-Acetylene Apparatus

Oxweld apparatus includes blowpipes, attachments, regulators, manifolds, cutting machines, acetylene generators, and related equipment from which you can select exactly the items needed for any application of the oxy-acetylene process. An Oxweld outfit assembled for general purpose welding and intermittent light cutting is illustrated above.

Send for catalogs describing Oxweld apparatus, specifying the types of equipment in which you are interested.

"Oxweld" is a registered trade-mark.

THE LINDE AIR PRODUCTS COMPANY
Unit of Union Carbide and Carbon Corporation
30 East 42nd St. UCC New York 17, N. Y.
In Canada: Dominion Oxygen Company, Limited, Toronto

▲ Mention Item NED-5219 when writing ▲

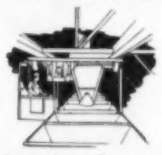
THIS ANSWER TO TODAY'S PROBLEMS MAY PROVE

A Life-Saver Tomorrow

Many an overworked factory has solved universally troublesome problems with Louden Overhead Handling. These Louden Systems took handling out of the hands of men and provided the equivalent of a big new manpower reserve. These Louden Systems took handling off the floor and made room for more production equipment. These Louden Systems simplified assembly and process operations . . . let men and machines spend more time at work . . . and in doing all these things increased production tremendously. Tomorrow when the race to reconvert begins, these selfsame Louden Systems will provide the precise flexibility and adaptability to place their possessors ahead in the race . . . and will even help in the big job of plant rearrangement. How much Louden Systems can help *you*, today *and* tomorrow, is told in the free Louden book "Economical Material Handling." A copy will be sent at your request. The Louden Machinery Company . . . 549 West Superior Avenue, Fairfield, Iowa.

What Louden Does

Louden Overhead Handling moves the transportation of materials, parts and assemblies out of the way of men and equipment, to the unused factory ceiling, saves floor areas for production. It can reach machines, bins, tables, ovens, etc., otherwise inaccessible . . . can travel from machine to machine, department to department, building to building . . . from the receiving door through the entire plant to the shipping platform. It can consist of simple, manually-operated hoists, cranes,



and carriers; floor-operated power units; cab-operated types; or the amazing new dial-operated Louden Automatic Dispatch System. A wide range of track sizes permits proper engineering of each Louden installation to load requirements. Many of America's most modern factories are completely Louden equipped and the full list of Louden users reads like a roll call of the world's leading industrials.

FREE Materials Handling Manual

64 pages of facts and photographs, scores of installations. How to handle all kinds of materials, in all kinds of plants. A wealth of man-saving, time-saving, space-saving ideas and methods. Write for free copy today.

LOUDEN OVERHEAD MATERIAL HANDLING SYSTEMS
Untangle Men, Machines, Manufacturing and Material Handling

▲ Mention Item NED-5220 when writing ▲

IMPULSE TYPE TIMER

Of compact design, this impulse initiated timer features shockproof construction, easily accessible contacts and dust-proof cover. Known as Type PSEH-1, it is available for either alternating or direct current applications.

Contact operation occurs at end of delay interval after receipt of momentary impulse from push button, limit switch or other source. Adjustable timing range is 20 to 1 and mechanism is immediately recycling. Integral double pull, double throw auxiliary relay provides for variety of circuit arrangements either common to or isolated from the control circuit.

Timers can be supplied for operation on 110 volt or 220 volt, 60 or 25 cycle alternating current or on direct current at any specified voltage from 6 to 120 volts. Made by Struthers-Dunn, Inc., 1321 Arch St., Philadelphia 7, Pa.

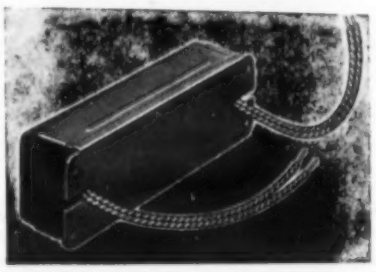
▲ Mention Item NED-5221 when writing ▲

GASKET FILM

Stressing importance of gaskets in industry, technical motion picture entitled, "Only A Gasket", is available to employee groups, technical societies, engineering schools and other organizations. Film is in 16-millimeter Kodachrome with sound. Commentary is by Lowell Thomas. Film runs for about 35 minutes. Research and manufacturing facilities employed in business of sealing joints in vital equipment against effects of high temperatures, pressures, corrosion and other service conditions are pictured. Requests for showings should be made on official letterhead. Issued by Goetze Gasket & Packing Co., 17 Allen Ave., New Brunswick, N. J.

▲ Mention Item NED-5222 when writing ▲

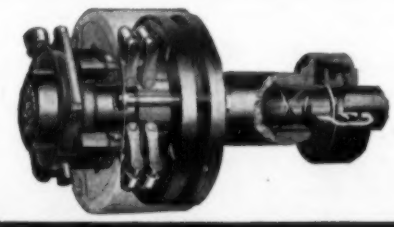
INSTANT STARTING BALLASTS



Designed for operation of new 40-watt instant starting fluorescent lamps, high voltage Tulamp ballast applies 450 volts to lamp at starting to strike arc between lamp cathodes. This operation eliminates need for separate starting equipment. Ballast is now available for 40 watt ratings and operates on 118 volt circuits. It delivers rated watts to lamp at nominal circuit voltage. Uniform light output is maintained closely even when circuit voltage varies within recommended operating range. Power losses are stated as being greater than in conventional preheat ballasts.

This unit provides high power factors and gives correction of cyclic light flicker. Special filters for suppression of radio interference are included. Ballast is housed in universal case which permits leads to be brought out either end or bottom for maximum installation flexibility. Made by General Electric Co., Schenectady, N. Y.

▲ Mention Item NED-5223 when writing ▲



TO PREVENT-

LOSS OF TIME AND LABOR

drive your productive machinery by the powerful persistent torque developed by MULE-PULL CLUTCHES—it saves time and boosts production by the smooth and instant acceleration it gives. The Loose Sleeves of these Clutches have RING-OILING lubrication which prevents ground-out bearings and avoids costly repairs. The single-arm, anti-friction ROLLER TOGGLES which actuate these Clutches give high horse-power capacity; require no lubrication and are free from repairs even under constant in-and-out engagement.

SEND FOR BULLETIN NO. 25-D

MULE-PULL CLUTCHES
BROWN ENGINEERING CO.
129 NORTH 3RD ST. READING, PENNA.

▲ Mention Item NED-5224 when writing ▲

THE GARLOCK KLOZURE
—A Superior Oil Seal

The GARLOCK KLOZURE Oil Seal (Patented) resists oil and water at high or low temperatures. Stays firm; stands up under severe conditions without losing its toughness, density or resiliency.

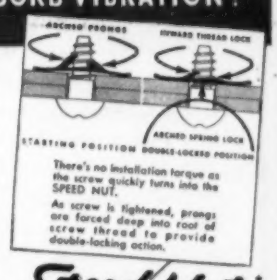
THE GARLOCK PACKING CO.
PALMYRA, NEW YORK

In Canada: The Garlock Packing Company of Canada Limited, Montreal, Que.

GARLOCK

▲ Mention Item NED-5225 when writing ▲

One of the deadliest enemies threatening the life of most products is VIBRATION. Made of LIVE spring steel, accurately heat treated, the SPEED NUT ABSORBS the most severe vibration, to prevent vibration loosening. SPEED NUTS are extremely light in weight, applied faster, and cost less. Small wonder that millions of SPEED NUTS were used prior to the war, on automobiles, radios, stoves, refrigerators, and thousands of other products . . . more are used today on military equipment . . . and more will be used after the war is won. A brief letter brings full details.



TINNERMAN PRODUCTS, INC.
2044 FULTON ROAD, CLEVELAND 13, O.

Speed Nuts (Patented)
FASTEST THING IN FASTENINGS!

▲ Mention Item NED-5226 when writing ▲

PALMGREN
ANGLE VISES

DRILLING
MILLING
GRINDING
FILING
FITTING
MARKING

Solve Difficult Angle Jobs

- ★ For Tool Room — Production Line — Bench.
- ★ Speed up work — End Makeshift Methods.
- ★ Quick Accurate Setups at any angle.
- ★ Sturdy Longlife Construction.
- ★ All Parts Accurately Machined.
- ★ Jaws Hardened Steel—Plain or Grooved.
- ★ Made in Sizes from 1½" to 8" Jaws.

Write for circular H-9 "101 Angle Operations" and complete line of PALMGREN Vises.

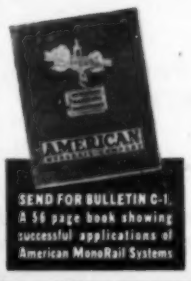
Chicago Tool & Engineering Company
Mfrs. of PALMGREN PRODUCTS for over 25 years
8378 South Chicago Avenue, Chicago 17, Ill.

PRECISION WORK AT ANY ANGLE

▲ Mention Item NED-5227 when writing ▲

AMERICAN MONORAIL EQUIPMENT

Saves 32c per TON IN HANDLING COST...



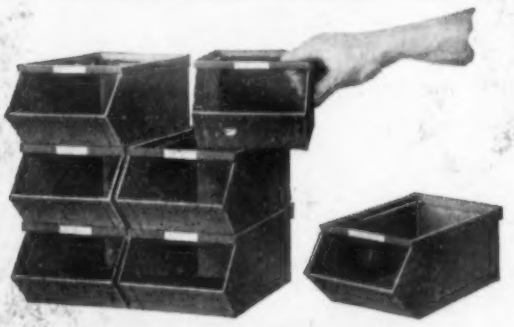
SEND FOR BULLETIN C-1. A 56 page book showing successful applications of American MonoRail Systems

Unloading and storing coiled rod formerly cost 40c per ton and required 5500 sq. ft. of warehouse space. Now, raw coils are unloaded, stored outside, and handled through pickling to punches and cold headers at 8c per ton. A SAVING OF 32c PER TON MADE POSSIBLE BY AMERICAN MONORAIL EQUIPMENT. This system was developed in conference with American MonoRail Engineers. A consultation can be easily arranged. Write today.

AMERICAN MONORAIL CO.
13116 Athens Ave., Cleveland 7, Ohio

▲ Mention Item NED-5230 when writing ▲

We have been given permission by WPB to manufacture Stackbins to be used as portable containers for production and assembly.



Save Time and Labor Handling Parts and Materials

Patented *Stackbins* keep parts and materials instantly accessible—eliminate waste hand motions—stack rigidly to form units of exactly the right shape and capacity at the point of assembly—save time and labor handling parts and materials.

Write today for full details and prices on all-welded steel *Stackbins*. Stackbin Corp., 71 Troy St., Providence, R. I.

STACKBINS
"STACKED AND STILL ACCESSIBLE"

▲ Mention Item NED-5231 when writing ▲

WALLACE No. 1 RADIAL SAW

ALL-PURPOSE SAW for WOOD AND METAL

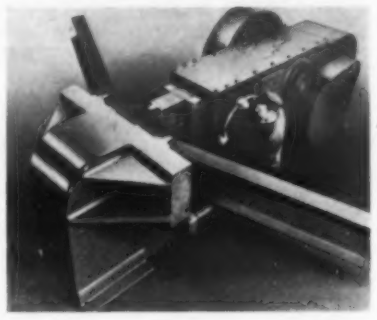
For cut-off, miter and rip work on Wood, Duralumin, Brass, Bronze, Steel, Glass and other refractory materials.

In the crating department, for plant maintenance work, for production sawing and cutting operations on wood, duralumin, metals, etc. the Wallace No. 1 Radial Saw is unexcelled. Material lays flat on table,—motor is moved back and forth in arm for cutting. Arm, column and motor all rotate 360° and can be set at any angle position for cutting. Motors to 2 H.P. Used with saw blades or 1/32" thick abrasive wheels. Write for bulletins on this cost-saving machine *today*.

J. D. WALLACE & COMPANY
145 S. California Ave. Chicago, Illinois

▲ Mention Item NED-5232 when writing ▲

BENDERS & STRAIGHTENERS



Available in six sizes and having capacities ranging from 50 to 400 tons, this line of bending and straightening machines handles structural shapes and other metal forms. Beams, channels, shaftings, rounds, squares, forgings, structural sections or practically any metal sections which required bending or straightening in lengths from 5 to 24 feet can be processed.

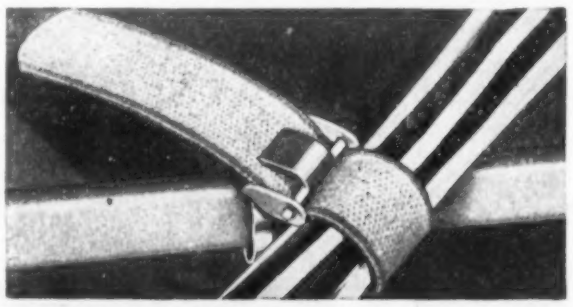
Work is performed cold and one man handles operation easily. Welded steel frame and enclosed operating machinery are design features. Continuously running ram with one bending block, strikes against shape to be bent midway between two bearing blocks. Length of stroke of ram is adjustable easily by convenient handwheel so located that operator has unobstructed view of work.

Free-running table rollers with anti-friction bearings support material being passed through machine. Auxiliary spacer block for bending small sections is furnished. Other construction details include flywheel mounted on anti-friction bearings and fully enclosed; quiet V-belt drive; cast steel gears and steel pinions, all having cut teeth; and high carbon steel forging cam shaft. High pressure fittings supply lubricants to bearings and slides. Bearings are bronze bushed. Made by **Thomas Machine Mfg. Co.**, Route 8, Pittsburgh 23, Pa.

▲ Mention Item NED-5233 when writing ▲

WIRE HARNESS SUPPORT

Permitting quick one-hand installation and removal of wires, this electric wire harness support strap consists of light weight, synthetic, sponge rubber coated fabric strap ⅝ inch



wide. It has 2800 pounds per square inch tensile strength. Simple buckle mounts on 360 degree swivel latch, permitting attachment at any angle.

One size of strap replaces all sizes of harness clips because strap support will carry from one to fifteen wires cushioned by sponge rubber so that no metal part can cause abrasion of wires. When single wire is carried, strap end may be clipped off. Harness can be removed with one hand without tools of any kind. Several types of mounting brackets are available which clamp securely to airframe structure without necessity of drilling holes. However, strap can be furnished with screw or rivet hole provision depending on customers' requirements. Strap retains flexibility at −70 degrees Fahr., complying with requirements of Army winterization program. Made by Line Support Div., **Adel Precision Products Corp.**, 10777 Van Owen St., Burbank, Calif.

▲ Mention Item NED-5234 when writing ▲

SAFETY STEEL HEAVY BEVEL

WILL NOT SPALL! WILL NOT MUSHROOM!

LETTERS and FIGURES

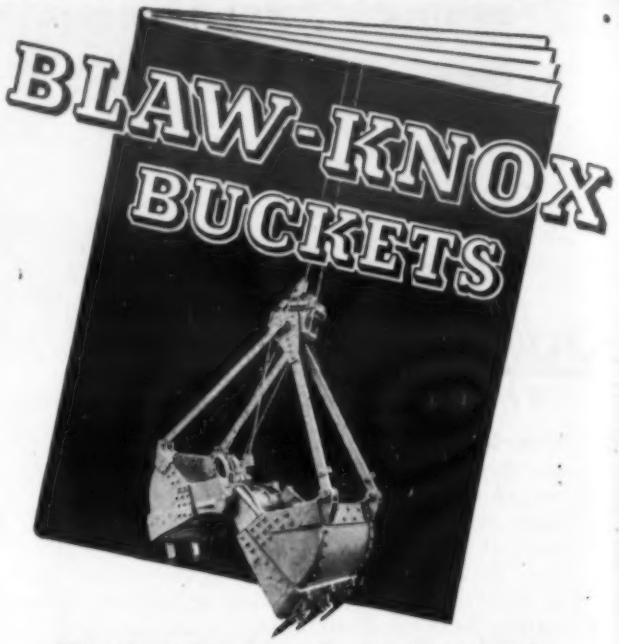
Cunningham Safety Heavy Bevel Letters and Figures are adaptable to practically any metal marking including armor plate and other tough materials.

Built for hard, continuous use and long life. Available in any character from 1/32" up.

IMMEDIATE DELIVERY!

M.E. CUNNINGHAM CO.
SAFETY STEEL STAMPS
151 E. Carson St., Pittsburgh, Pa.

▲ Mention Item NED-5235 when writing ▲



Write Headquarters for the Catalog You Need

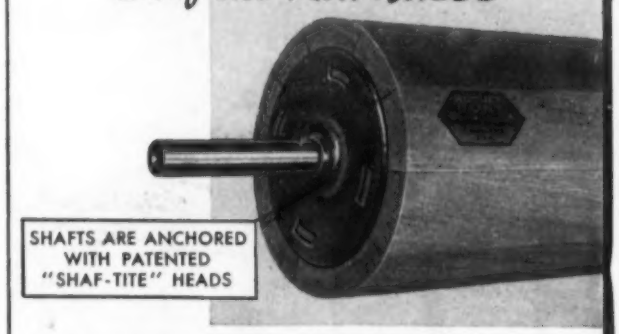
No. 1586—Blaw-Knox Concrete Buckets.
No. 1606—Blaw-Knox Buckets for Contractors.
No. 1696—Blaw-Knox Buckets for Single Drum Hoists for use on Railroads, Mills, Foundries, Etc.
No. 1745—Blaw-Knox Buckets for "Burtoning" handling Nitrates, Grain, Potash, Etc.
No. 1757—Blaw-Knox 2 Line Lever Arm Buckets for Rehandling, Barge Cleanup, General Purpose, Hard Digging, Dredging.
No. 1865—Blaw-Knox 4 Rope Buckets for Coal, Ore and Cleanup.

BLAW-KNOX DIVISION of Blaw-Knox Company
2066 Farmers' Bank Bldg., Pittsburgh, Pa.

▲ Mention Item NED-5236 when writing ▲

THE BEST WOOD ROLL FOR DRY SERVICE EVER MADE . . .

"Shaf-tite" Roll No. 252



That's what customers say who have been using these "Shaf-tite" No. 252 LAMINATED Wood Rolls for years. Made of kiln-dried pieces, glued under heavy pressure. Shafts are "anchored" with patented "Shaf-tite" heads. Standard sizes — 4 to 10 inch diameter. Write for quotation.

RODNEY HUNT

"Shaf-tite" ROLLS

RODNEY HUNT MACHINE CO., 73 Maple St., Orange, Mass., U.S.A.

▲ Mention Item NED-5237 when writing ▲

TRIPLE THREAT

WORK BENCH, TRUCK and LIFTER *All in One*

● SERVICE LIFTABLE

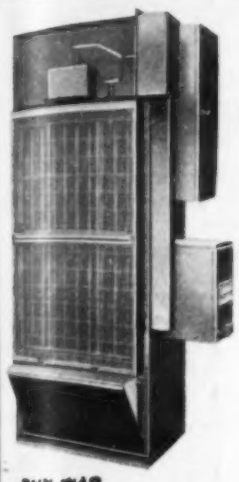
The Service LIFTABLE does three things and does each remarkably well. You can use it as a bench at any height from 28" to 42" . . . as a truck, ideal for moving flat, heavy materials to another bench . . . as a lifter for accurate and easy leveling off at a new height. It's all steel, electric welded construction . . . anchored to floor by caster locks. Standard model takes one ton loads . . . larger models with higher lift and capacities to 5,000 lbs. *Write for Descriptive Bulletin.*

SERVICE CASTER & TRUCK DIVISION
OF DOMESTIC INDUSTRIES, INC.
578 N. Brownswood Avenue, Albion, Michigan
Eastern Factory:
400-08 Somerville Ave., Somerville (Boston) Mass.
Toronto, Canada:
United Steel Corporation, Ltd., SC&T Co. Division

SERVICE
Trucks, Casters and Specially Designed Lifting and Hauling Units

▲ Mention Item NED-5238 when writing ▲

The SOLUTION for STUBBORN ATMOSPHERIC DUST PROBLEMS



Product spoilage and health hazards caused by dust, soot, smoke—even oil vapors and welding fumes—are readily overcome by the installation of an AAF air filter designed to your particular requirements. The Electro-Matic air filter which is illustrated at the left, combines electric precipitation with the proven advantages of the automatic self-cleaning viscous impingement filter to provide the highest efficiency in air cleaning. Ask for Bulletin No. 250 D.

BUY WAR BONDS

AAF AMERICAN AIR FILTER CO., INC. INCORPORATED
391 CENTRAL AVE. LOUISVILLE, KENTUCKY
IN CANADA, DARLING BROTHERS, LIMITED, MONTREAL, P. Q.

▲ Mention Item NED-5239 when writing ▲

NOW YOU CAN DRILL HARDENED STEEL

with "HARDSTEEL" Drills

These are just a few of the many uses for "HARDSTEEL" drills—the drills that drill steel hardened by any method without annealing.

1. Drill holes in full hardened dies.
2. Drill holes in armor plate.
3. Remove broken set screws on a drill press.
4. Start holes in case hardened parts.
5. Enlarging holes in hardened parts to accommodate last minute changes.
6. Drill spring steel after tempering.
7. Drill parts after hardening to avoid warping or distortion.
8. Drill production parts after hardening to speed matching at assembly.
9. Drill work-hardening materials.
10. With a slight change in point grinding, drill hard carbon and plastics.

To save time and speed production, all you need are a drill press, a "HARDSTEEL" drill and the "know-how" given in detail in the "HARDSTEEL" Operators Manual. It tells recommended speeds, how to grind on an ordinary wheel, when to use coolants, how to use drills for countersinking and counterboring and a wealth of similar information. Write for your copy today.

"YOU HARDEN IT—WE'LL DRILL IT"

BLACK DRILL CO. • Division of BLACK INDUSTRIES
1400 EAST 222nd STREET • CLEVELAND 17, OHIO

"HARDSTEEL"
DRILLS • TOOL BITS • SPECIAL TOOLS

▲ Mention Item NED-5240 when writing ▲

Learn the facts ABOUT CHERRY BLIND RIVETS

Cherry Rivets are easy to use. Actually it takes less skill to head up these blind rivets perfectly than it does conventional rivets. The difference lies in the technique. And that is all cleared up in an interesting little book we've prepared. . . Get your copy.

CHERRY RIVETS, THEIR MANUFACTURE AND APPLICATION ARE COVERED BY U. S. PATENTS ISSUED AND PENDING

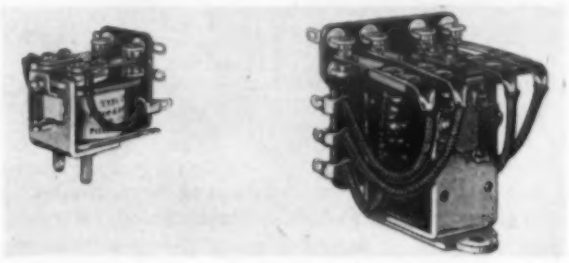
Cherry Rivet Company
LOS ANGELES, CALIFORNIA

Keep a copy handy for reference. Ask for Manual B-44... Address Dept. A-113, Cherry Rivet Company, 231 Winston St., Los Angeles 13, California.

▲ Mention Item NED-5241 when writing ▲

ELECTRICAL RELAYS

Designed for circuit switching applications in radio equipment and other similar devices, these two relays can also be used in industrial, aircraft and other fields. Series KR relays,



shown at left, are intended for applications where size and weight are important considerations. Direct current types can be adjusted to withstand vibration encountered in aircraft. Mechanism for easy adjustment of armature spring can be provided where critical pull in value of current or voltage is required. Unless otherwise specified, contacts are of fine silver and rated at 3 amperes, 110 volts on 60 cycle non-inductive alternating current. Coils are available for voltage of up to 110 volts alternating current or 60 volts direct current.

Series KL relays, shown at right, have ample coil space and larger number of poles than KR series. They will operate on as low as 0.2 watts to give advantages of sensitivity and wiping action of spring mounted fine silver contacts. Unless otherwise specified, contacts are of fine silver and rated at 3 amperes, 110 volts on 60 cycle non-inductive alternating current. Coils can be supplied for up to 220 volts alternating current or 110 volts direct current. Made by **Potter & Brumfield Mfg. Co.**, 102 N. First St., Princeton, Ind.

▲ Mention Item NED-5242 when writing ▲

PANEL FASTENERS

Design and construction improvements incorporated in Simlok fasteners for cowling and panels make possible fastening or unfastening in quarter turn. When unfastened, stud is self-ejecting so that it can be noticed readily. This permits single quick inspection to determine whether all fastening operations have been completed.

Unit is available with flush, oval and wing heads, each in three sizes. Tapered design adapts it for assembling curved sheets in that it forces assembly into proper alignment before locking. Side play is eliminated. End play or spring deflection is held to maximum of 0.008 inch or just enough to lock fastener.

Device is constructed with hollow inner one-piece housing which is integral with locking lugs. It is case hardened to resist wear. Long-travel helical spring ejects fastener when unlocked. Outer housing retains spring and inner housing as complete assembly. Locking ring makes possible permanent installation.

To lock, two sheets are brought together so that stud enters receptacle. Then stud is depressed against spring action and turned until it rides under cam surfaces. It locks in seat in cam. Made by **Simmons Machine Tool Corp.**, Simlok Div., 1000 N. Broadway, Albany, N. Y.

▲ Mention Item NED-5243 when writing ▲

THOUSANDS OF MAN-HOURS SAVED
GET EVERYTHING IN ELECTRONICS & RADIO FASTER...FROM THIS ONE CENTRAL SOURCE

Here's How: (1) Rush delivery from the largest and most complete stocks of electronic and radio equipment under one roof; (2) Centralized procurement for *all* your needs; (3) Technical assistance; (4) Expediting service. *Save time.* CALL ALLIED FIRST!

FREE! Send For Today's Most Complete BUYING GUIDE

Write, Wire or Phone Haymarket 6800
ALLIED RADIO CORPORATION
833 W. Jackson Blvd., Dept. 41-J-4 Chicago 7, Ill.

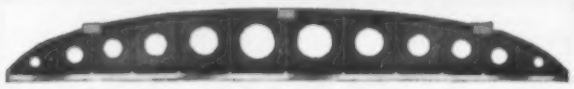
Over 10,000 Radio and Electronic Items . . . such as:

Condensors	Transformers	Rheostats	Sockets
Relays	Photo Cells	Public Address	Wire
Tubes	Switches	Coils	Receivers
Test Equip.	Resistors	Rectifiers	Speakers

ALLIED RADIO
EVERYTHING IN ELECTRONICS AND RADIO

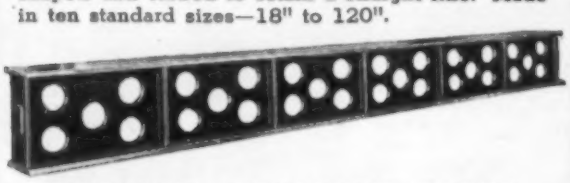
▲ Mention Item NED-5244 when writing ▲

Challenge STRAIGHT EDGES



HAND-SCRAPED

● Made of a special analysis semi-steel, Challenge hand-scraped Straight Edges are scientifically shaped and ribbed to retain a straight line. Made in ten standard sizes—18" to 120".



PARALLEL STRAIGHT EDGES
HAND-SCRAPED or PRECISION GROUND

For leveling and setting up of machine units, in the laying out of production and assembly lines. Made of special analysis semi-steel and cored for lightness. Four standard sizes.

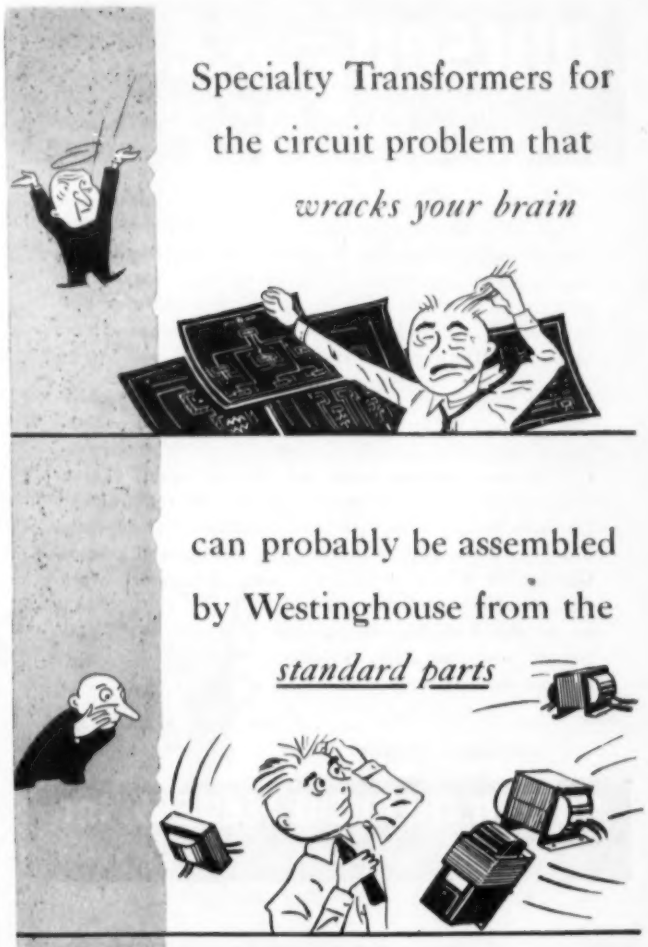
OTHER SURFACE PLATE EQUIPMENT
Includes Right Angle Irons, V-Blocks, Parallels, and Angle Plates. Write for data on any item.

FOR VICTORY BUY UNITED STATES WAR BONDS AND STAMPS

THE CHALLENGE MACHINERY CO.
Main Office and Factory: GRAND HAVEN, MICH.
Eastern Sales Office: 50 Church Street, NEW YORK

▲ Mention Item NED-5245 when writing ▲

Specialty Transformers for the circuit problem that *wracks your brain*

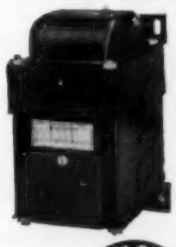


can probably be assembled by Westinghouse from the *standard parts*

that are used in the *large variety* of specialty transformers built by

J-21264

WRITE FOR COMPLETE DETAILS



Westinghouse
MT TRANSFORMERS

DEPT. 7N, WESTINGHOUSE ELECTRIC & MFG. CO., EAST PITTSBURGH, PA.

▲ Mention Item NED-5246 when writing ▲

AIR, TOO, MUST WORK FOR VICTORY
KEEP IT MOVING WITH
Peerless VENTILATING SETS

★ Mess halls, army barracks, war service buildings and industrial plants require the movement of air for ventilating, cooling, heating or complete air conditioning.

These situations demand ventilating fans that not only measure up to capacities rated on the test floor, but which will also deliver the rated air volumes under practical operating conditions. Peerless Utility Ventilating sets are just such units.

BELT AND DIRECT DRIVE TYPES

Peerless Ventilating Sets are supplied in 26 belt-driven sizes and 12 direct-connected sizes. Belt-driven units are powered with from ½ to 7½ horsepower motors. Direct-driven units have ½ to 2 horsepower motors. Belt drive units are also furnished with variable pitch motor sheaves for speed adjustment.

All units can be supplied with or without weatherproof hood covers for drive mechanism.

Write for Bulletin SDA-91, which gives complete dimensions and ratings of Peerless Utility Blowers.

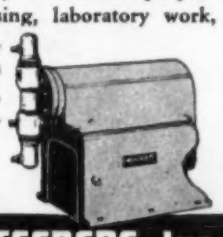
THE PEERLESS ELECTRIC CO.
WARREN, OHIO
FROM Pearl Harbor TO VICTORY

▲ Mention Item NED-5247 when writing ▲

WILSON Pulsafeeders
(PROPORTIONING PUMPS)
Guaranteed better than 1/8 of 1% accurate

Eminently superior, almost infallible flow-controls to handle liquids of any nature in any pre-determined quantity from one cubic centimeter to four hundred or more gallons per hour. Accuracy, in most instances, is guaranteed at better than ⅛ of 1% for single or multiple liquids. Flexible and adaptable, they satisfy an almost limitless range of requirements.

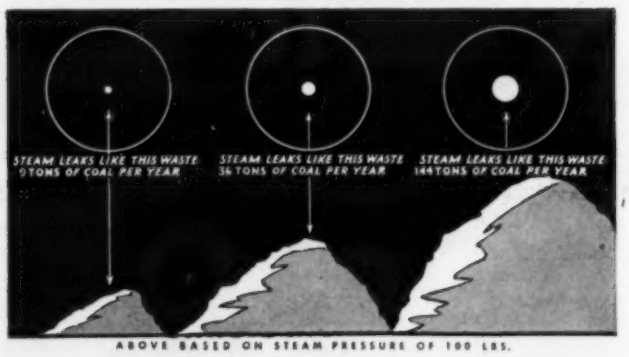
Let us send you details of their packless, positive-displacement piston action . . . of the absence of packing glands and breakable diaphragms . . . freedom of contact between working parts and flowing liquids. Let us tell you how they will meet your specific requirements for capacity, accuracy, economy, durability and dependability, as those requirements apply to chemical proportioning, food and other processing, laboratory work, water and sewage treatment . . . or to the handling of problem liquids such as acids, volatiles, slurries, etc., in mono- or multi-flow.



Literature on request.

WILSON CHEMICAL FEEDERS, Inc.
202 CLINTON ST. Est. 1923 BUFFALO 4, N. Y.

▲ Mention Item NED-5248 when writing ▲



ABOVE BASED ON STEAM PRESSURE OF 100 LBS.

Speaking of FUEL CONSERVATION have you checked your traps lately?

Photograph shows Super-Silvertop Steam Traps piped straight-in-line or as an elbow. Inspected without removing from the line.

● The National Fuel Efficiency Section of the Bureau of Mines asks us to conserve fuel to win the war.

The above chart shows how leaks waste fuel . . . Old obsolete steam traps are a source of leaks.

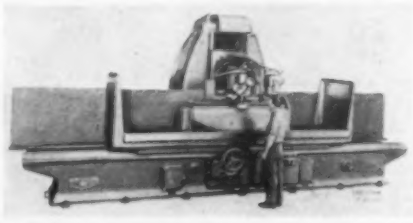
Right now inspect your traps. If you need new traps, install fuel-saving ANDERSON SUPER-SILVERTOPS. Send for the book, "How to Choose a Steam Trap," giving complete information.

THE V.D. ANDERSON COMPANY
1932 W. 96th St. • Cleveland 2, Ohio

SUPER-SILVERTOP STEAM TRAPS

▲ Mention Item NED-5249 when writing ▲

WAY GRINDER



Tables, slides, saddles, heads, turrets and other large parts having angular machined ways or surfaces are precision finished on this vertical spindle way grinder. There is no need for hand finishing operations and hardened ways can be given fine, accurate finish. It can also be used for grinding flat parts where it is not necessary to remove large amount of stock.

Double column construction is used. Grinding head unit is mounted on dovetail casting slide which is part of vertical slide assembly. This slide is adjustable horizontally by hand, with rapid traverse by electric motor drive. Graduated circle permits rough setting of swivel head, with final adjustment being made by sine bar or checking gage.

Power driven wheel truing device facilitates dressing to desired angle. Sizes range from 12 x 48-inch to 36 x 192-inch tables. Made by **Mattison Machine Works**, 550 Blackhawk Park Ave., Rockford, Ill.

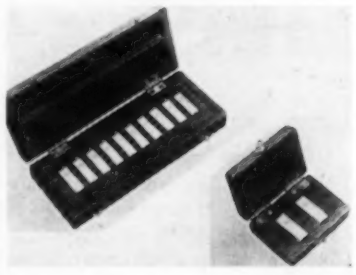
▲ Mention Item NED-5250 when writing ▲

WELDING INSTRUCTION

"The Story of A-C Welding" is two-part, all-color sound motion picture which is offered through G-E arc welding specialists and distributors who will arrange to exhibit it upon request. It covers in detail the complete story of alternating current welding and its advantages. Actual producton welding scenes demonstrate speed, flexibility and efficiency of this welding process in all positions and on all types of joints. Laboratory demonstrations and close-ups of arc and molten steel show how troublesome arc-blow is eliminated. Animated sketches illustrate some of more technical points. Offered by **General Electric Co.**, Schenectady, N. Y.

▲ Mention Item NED-5251 when writing ▲

CARBIDE GAGE BLOCKS



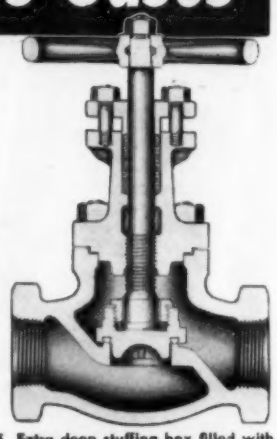
Maintaining accuracy over long period of time, line of carbide gage blocks is available in sets. These blocks are made of tough, wear resistant tungsten carbide and are held to extremely close limits. Among advantages claimed is ease with which they wring to form combinations. All sets are packed in durable cases finished to reveal natural grain of wood.

Three all carbide sets are offered, of ten, two and two blocks respectively, and one set of eighty-one steel blocks with two 0.050 inch tungsten carbide wear blocks. Ten block carbide set ranges in size from 0.050 to 0.0509 inch in steps of 0.0001 inch. Two smaller sets are intended primarily to be used as wear blocks with steel gage blocks. One contains two 0.050 inch blocks; the other two 0.100 inch blocks. Illustrated are ten block sets and two block sets, size 0.050 inch. Made by **Jansson Gage Co.**, 19208 Glendale Ave., Detroit 23, Mich.

▲ Mention Item NED-5252 when writing ▲

Safe Control for Noxious Gases

CRANE AMMONIA VALVES



1. Recommended especially for high pressure ammonia refrigeration service. Also for certain other hazardous gases and special process work.
2. Rated at up to 300 pounds ammonia working pressure. Tested at 300 pounds air-under-water. In globe and angle patterns; sizes up to 4 in.
3. Body material is Crane Ferrosteel—a metal having far greater strength than cast iron. High margin of safety is provided in all design, construction, and workmanship details.
4. Tight closure is assured by Crane rolled-in lead face disc seating against crown face in body. Where lead is not suitable, hardened steel disc and seat ring are furnished.
5. Extra deep stuffing box filled with durable packing provides a lasting stem seal and smooth operation.

These valves are part of a complete line for ammonia service including needle-point and check valves—flanged and screwed fittings—flanges and unions—return bends etc. For complete information, consult your local Crane Representative. Crane Co., General Offices: 836 South Michigan Ave., Chicago 5, Ill.

CRANE *Anything for Piping Systems —You Can Get It From Crane!*

VALVES • FITTINGS • PIPE • PLUMBING • HEATING • PUMPS

▲ Mention Item NED-5253 when writing ▲

Is Your Problem One of REDUCING OVERHEAD?

A survey of your material handling operations may reveal methods for substantially reducing your plant overhead. The new Baker Catalog contains actual case histories of many companies who have accomplished this with Baker Trucks.

If you have a material handling problem and are looking for the best answer, the Baker Material Handling Engineer nearest you will gladly help you. Or write direct.

Write for your copy of the new Baker catalog

Any executive concerned with material handling will find this book a valuable source of information. Write for your copy today.

BAKER INDUSTRIAL TRUCK DIVISION of the Baker Raulang Co.
2179 WEST 25th STREET • • CLEVELAND, OHIO
In Canada—Railway and Power Engineering Corporation, Ltd.

Baker INDUSTRIAL TRUCKS

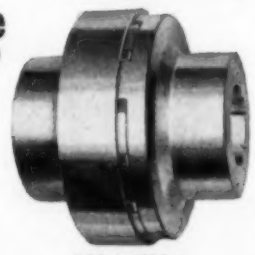
▲ Mention Item NED-5254 when writing ▲

NEW! SAFEGUARDED COUPLING

Protects men and machinery

L-R FLEXIBLE COUPLINGS

Type "C"



2.20 to 170 h.p. Pat. & Pats. Pend.

THE COUPLING WITH OUTSIDE STEEL COLLAR EXTENSION

Entirely new feature. Additional protection from weather, dirt, moisture. Safeguards clothing and fingers. Boltheads practically concealed, yet readily accessible. More compact design, with overall smoothness reducing even airflow resistance. Another Lovejoy improvement with most dependable correction for misalignment, and takeup of shock and vibration. Non-lubricated. *Exceptionally quiet.*

Send for Complete L-R Catalog

Couplings 1/6 to 2500 h.p. Free quick-finding Selector Charts. Write or write

Lovejoy Flexible Coupling Co.
5003 W. Lake St. Chicago 44, Ill.

▲ Mention Item NED-5255 when writing ▲

MAKE TOUGH JOBS EASY WITH UNITED STATES ELECTRICAL TOOLS

HERE'S a simple problem in labor-mathematics: more power per man produces more manpower per job. And when you give them UNITED STATES ELECTRICAL TOOLS to work with you're a big step ahead in licking manpower shortage.

The entire US LINE is the result of a know-how developed in originating, pioneering and growing since 1897. Illustrated in the photograph are the ¼" and ½" portable electrical drills. Write for details about the complete line.

The UNITED STATES ELECTRICAL TOOL Co.
CINCINNATI, OHIO

▲ Mention Item NED-5256 when writing ▲

Prompt Delivery! —on both types

With its new modern plant and multiplied capacity ARMSTRONG-BRAY & CO. can give prompt delivery on *both* standard types of belt lacing. WIREGRIP Belt Hooks with the patented ARMSTRONG-BRAY blue aligning cards hold every hook in perfect alignment, preventing hook loss from handling or waste of short card ends. (6 sizes).

● STEELGRIP Steel Lacing comes in 11 sizes, in convenient boxes or long lengths for wide belts. Especially recommended for rubber and fabric belts for it compresses belt ends and prevents fraying. Applied with a hammer, STEELGRIP penetrates belt easily, clinches securely and smoothly. 2-piece hinged rocker pins increase flexibility and reduce wear. (11 sizes).

WRITE FOR CATALOG

ARMSTRONG-BRAY & CO.
"The Belt Lacing People"
5362 Northwest Highway
Chicago 30, U. S. A.

▲ Mention Item NED-5257 when writing ▲

Only NON-FERROUS AND STAINLESS FASTENINGS

WHEN you have a toothache you go to a dentist. When you need legal advice you go to a lawyer. Both men are specialists.

By the same token . . . when you need non-ferrous and stainless fastenings come to the house that specializes on them. . . . Come to the Harper Organization which is concerned exclusively with the manufacture of bolts, nuts, screws, washers, rivets and specials of Brass, Copper, Naval Bronze, Silicon Bronze, Monel and Stainless . . . an organization not concerned with common steel.

This specialization brings refinements in product quality and "extras" in service to customers that are most rare. Start these "extras" your way by writing on your company letterhead for a complimentary copy of a 4 color, 104 page catalog and reference book.

THE H. M. HARPER COMPANY
2628 Fletcher Street • Chicago 18, Illinois
BRANCH OFFICES: New York City • Philadelphia
Los Angeles • Milwaukee • Cincinnati • Houston
Representatives in Principal Cities

HARPER
EVERLASTING FASTENINGS
BRASS • BRONZES • COPPER • MONEL
STAINLESS STEEL

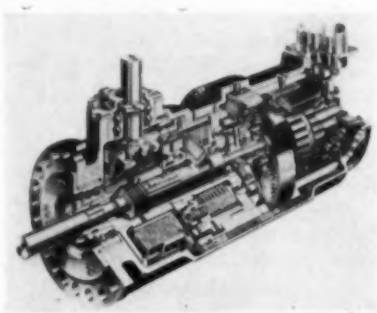
▲ Mention Item NED-5258 when writing ▲

FATIGUE TESTING MACHINE

Based on published reports of studies which indicate that specimens of 1-inch minimum diameter eliminate size effect in fatigue, model SF-10 R rotating beam fatigue testing machine has testing capacity from 0 to 10,000 inch pounds. It is adjustable by units of 5 inch pounds bending moment by position of weight on beam. Specimen length is adjustable from 3½ to 9½ inches. Made by **The Baldwin Locomotive Works**, Southwark Div., 942 Chester Pike, Eddystone, Pa.

▲ Mention Item NED-5259 when writing ▲

ELECTRIC ACTUATOR

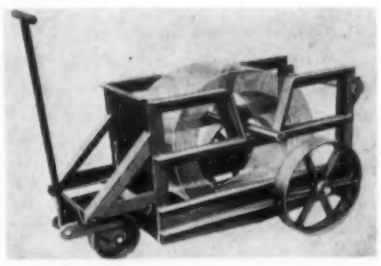


Intended for aircraft applications requiring electric motor driven gear reduction units to retract and lower landing gear, opening and closing bomb bay doors, controlling wing flaps and other similar functions, electric actuators are available in concentric and right-angle design to provide maximum compactness and clearance. Features include automatic compensating torque limiting device in form of multiple disc clutch which protects reduction gearing and motor in event of undue loading.

Magnetic equalizing clutch prevents over-running and jamming. This feature also facilitates hand operation on models so equipped by eliminating resistance of gear train and motor. Explosionproof motors on certain models are protected against explosive vapors, mud and dirt. Motors operate on 24 volts direct current. Made by Bendix Aviation Corp., **Eclipse-Pioneer Div.**, 1943 Williams Ave., Teterboro, N. J.

▲ Mention Item NED-5260 when writing ▲

COIL STEEL TRUCK



Built only on order to take care of coils of specific size and weight this coil steel truck is constructed of heavy angle and plate. It is equipped with three heavy duty, roller bearing metal wheels. Safety bar at rear is chained to one side of truck. By removing bar, coil can be rolled out rear or it can be picked up by overhead hoist by means of center bar shown in illustration.

Truck illustrated is of 1 ton capacity. Inside width is 15 inches, length 36 inches. Overall height is 26 inches, floor clearance 3 inches. Made by **Palmer-Shile Co.**, 7116 W. Jefferson Ave., Detroit 17, Mich.

▲ Mention Item NED-5261 when writing ▲

PERFECT COPIES... as Quickly as You Want Them

WITH A
HUNTER
Electro-Copyist

● No more proof-reading copies. No need to check tracings. The Electro-Copyist *can't* make a mistake.
● Makes hand-tracings unnecessary. Reproduces direct from pencil sketches, clearer than the original.
● No lens, no dark-room, no focusing. Your office boy can operate it.
● Copies are size-for-size, change-proof, smudge-proof.
● Reproduces in seconds anything written, printed or drawn.

Only Hunter Electro-Copyist has a range of models to meet every copying need, from office portables to units specially designed for the aircraft industry that handle work up to 48" x 168", or dozens of smaller originals at once.

★ *Hunter's staff of experts are anxious to help you improve your photocopy work. Consultations involve no obligation.*

PRICES FROM $57.50 to $3000.

HUNTER ELECTRO COPYIST, INC.
433 S. Warren St. • Syracuse 2, N. Y.

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SPEEDY AIR VISE

GRIPPING FORCE 15 TIMES AIR LINE PRESSURE

● Speedy Air Vise helps workers get out more and better work—in less time! Foot control valve opens and shuts vise instantly, leaving *both* hands free to produce. Operates from air line or individual compressor, exerting a grip of 15 times air line pressure. Jaw opens up to 3 inches, easily fitted to hold castings, parts, jigs, etc. Speeds up every drilling, light milling, tapping and assembly operation. Compact, sturdy, trouble-free, low in cost! ····· *Speedy Air Vise, complete with Foot Control Valve, Air Hose and Fittings, only* $24

Prompt Delivery from Your Supplier or Write Direct.

W. R. BROWN CORPORATION
5718 Armitage Avenue • Chicago 39, Ill.
AIR REGULATORS • AIR FILTERS • AIR GUNS • PORTABLE COMPRESSORS

▲ Mention Item NED-5263 when writing ▲

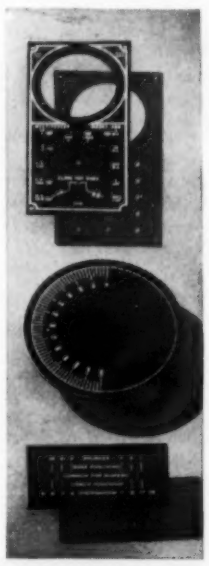
JOHNSON BRONZE SLEEVE TYPE BEARINGS

Electric Motor Bearings

● Good motor performance depends to a great extent on the bearings. If you want to get the best from your motors, install Johnson Bearings. Correct in every detail, they slip right into place with a minimum of effort. Reasonably good service is available on more than 250 types. Write for Catalogue.

JOHNSON BRONZE
SLEEVE BEARING HEADQUARTERS
580 S. MILL STREET NEW CASTLE, PA.

▲ Mention Item NED-5264 when writing ▲



Paste the Synthographic Process in Your Post War Book...

When post war competition starts and lower cost, faster production becomes a "must," remember the Synthographic Process.

The Synthographic Process is a low cost method for marking Synthane panels or fabricated sheet parts in quantity. Letters, numbers, or designs rendered in line can be reproduced accurately and at a fraction of engraving cost. Accuracy of calibrations can be maintained because Synthane is unaffected by humidity or temperature changes. Consider this process and the many other advantages presented by Synthane. Send for the informative Synthane Catalog today

SYNTHANE
TECHNICAL PLASTICS
SHEETS • RODS
TUBES • FABRICATED
PARTS • MOLDED-
LAMINATED • MOLDED-
MACERATED

SYNTHANE CORPORATION,
N. E. River Road, Oaks, Penna.
Please send me a copy of the complete Synthane Plastics Catalog.

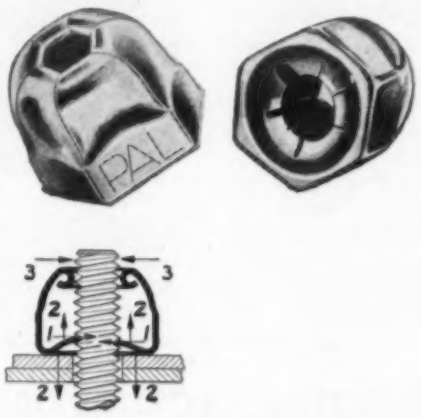
*Name*_____
*Name of Company*_____
*Title*_____
*Address*_____
*City*_____ *State*_____

▲ Mention Item NED-5265 when writing ▲

▲ Mention Item NED-5267 when writing ▲

SELF-LOCKING NUT

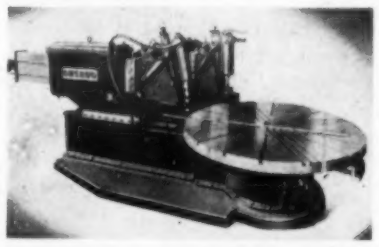
Triple grip is feature of type 6NAO Palnut self-locking nut. Base is like standard nuts of line with six spring steel jaws that fit bolt thread perfectly. When nut is tightened, its arched slotted jaws close in all around bolt. Spring tension is exerted upward on bolt threads and downward on nut base, securely locking nut to bolts. This is regular double locking action found in all Palnuts. Third grip is exerted on bolt in type 6NAO, however, by top portion of nut. Sides have been extended up and in, leaving hole in top slightly smaller in diameter than outside diameter of bolt. When bolt extends through top of nut, as shown, it forces top open so that strong spring pressure is exerted on bolt.



Spring tension is constant and will hold nut in any desired position on bolt regardless of severe vibration. Nut is thus adaptable as adjustment nut for electrical contacts and mechanical travel limits. It is also very useful on bolts holding together parts made of glass, plastic and other such materials, where resilient fastening is required that can be tightened without danger of fracturing these relatively brittle materials. Made by **The Palnut Co.**, 45 Cordier St., Irvington, N. J.

▲ Mention Item NED-5269 when writing ▲

AUTOMATIC SHAPER

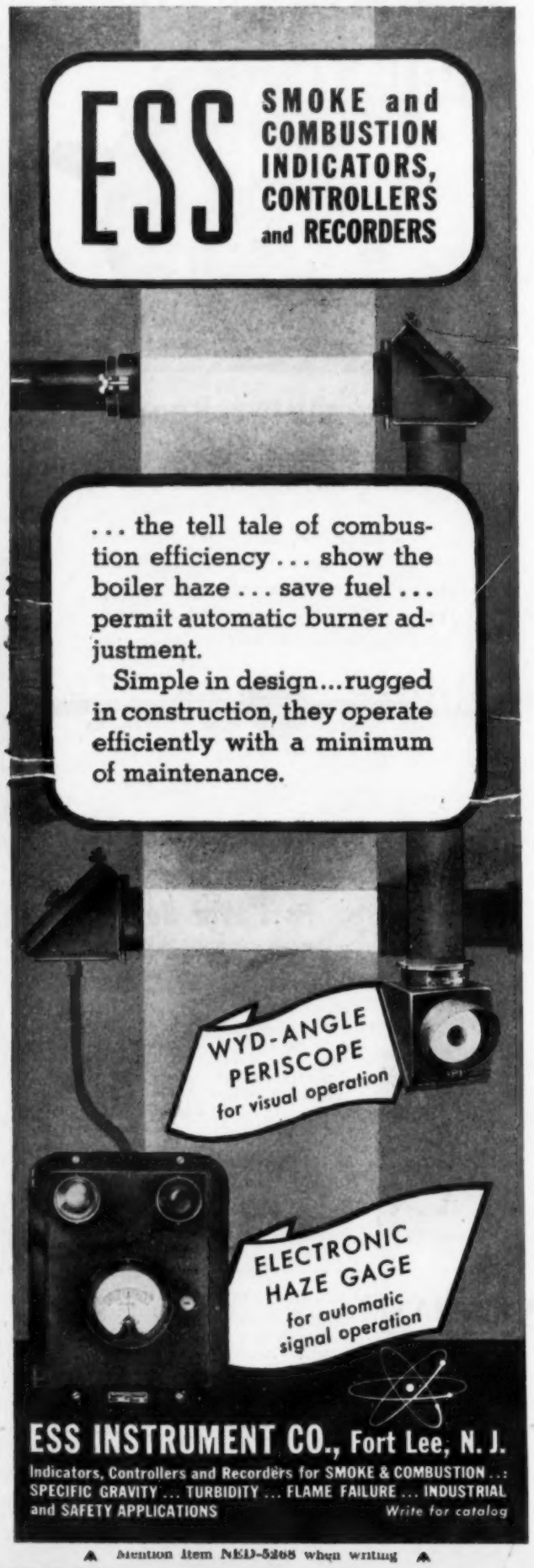


Such parts as boat ribs, bulkhead sections, furniture panels and frames are produced at high speed with this model WP-112 automatic shaper which is designed for fabricating large pieces. Turning capacity is 112 inches and it handles work up to 79 inches square or 97 inches long.

Each cutter spindle rotates at 7200 revolutions per minute and is direct driven by 12½ horsepower, 3-phase, 120-cycle motor. Entire cutter head assembly tilts in one plane to maximum of 10 degrees either side of vertical. Tilt of head is controlled automatically and is varied by use of templates or pattern setups.

Ram type cutter arms each have maximum travel of 22 inches on table radius line. Machine may be set to reach any point 12 inches from table center and 14 inches beyond edge. Work is clamped to rotating table by pneumatic clamps controlled by automatic safety switch. Rates of feed of 84-inch diameter table are from 0.2 to 2 revolutions per minute. Table feed drive consists of 2 horsepower General Electric Thymotrol unit and 2 horsepower direct current motor. Thymotrol unit permits stepless speed control of table feed, affording maximum production. Made by **Onsrud Machine Works, Inc.**, 3956 Palmer St., Chicago 47, Ill.

▲ Mention Item NED-5270 when writing ▲



▲ Mention Item NED-5268 when writing ▲

IF you use bearings, bushings, sleeves, liners, or other tubular parts, and want them stronger, denser, more uniform and more durable, write for this bulletin.

Shenango-Penn centrifugal castings have such a uniform, dense structure that their physical qualities approach those of forgings. Widely used in planes, war ships, cargo ships, war equipment of many kinds, they will have many applications in peace-time machinery and products. Get your copy of this data book, for specifications, physical properties, sizes, applications and other important information. Ask for Bulletin 143.

SHENANGO-PENN MOLD COMPANY
744 West 3rd Street,
Dover, Ohio
Executive Offices:
Pittsburgh, Pa.

▲ Mention Item NED-5271 when writing ▲

The Spencer SUMP-VAC Cleans Sumps in 2 to 10 Minutes

A portable vacuum producer with a 125 gallon tank, on wheels, picks up liquid at the rate of 40 gallons per minute. Machine emptied by gravity in 2 minutes or elevates liquid by pressure up to 6 feet.

Filter basket collects chips, float valve prevents over-filling. No priming necessary. ¾ and 1½ H.p. models. Ask for the bulletin.

SPENCER HARTFORD VACUUM CLEANING
THE SPENCER TURBINE COMPANY, HARTFORD 6, CONN.

▲ Mention Item NED-5272 when writing ▲

IRON CORES

STANDARD, HIGH-FREQUENCY, INSULATED, HIGH-RESISTIVITY,
and many special types

Recent Stackpole developments include molded Iron Cores for radio equipment operating at frequencies as high as 175 megacycles. Other types are available in many shapes and sizes for use up to 50 megacycles. Specialties include insulated and high-resistivity types, iron cores for choke coils, transformer cores, and various others. Write for Engineering Bulletin No. 7.

Stackpole Carbon Co., St. Marys, Pa.

WRITE for Stackpole
Electronic Components Catalog featuring Switches, Fixed and Variable Resistors, Iron Cores, etc.

STACKPOLE
MOLDED METAL POWDER AND CARBON PRODUCTS

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ELECTRICITY
FOR ANY JOB ANYWHERE

For a dependable source of electricity on projects remote from commercial power, Onan Electric Plants are proven leaders in the field. More than half of the Armed Forces' total requirements for power plants are built by Onan.

Gasoline-driven . . . Single-unit, compact design . . . Sturdy construction . . . Suitable for mobile, Stationary or emergency service.

Over 65 models, ranging in sizes from 350 to 35,000 watts. 50 to 800 cycles, 115 to 660 volts, A.C.—6 to 4000 volts, D.C.—Also dual A.C.-D.C. output types.

Descriptive literature sent promptly on request.
D. W. Onan & Sons,
1916 Royalston Ave.,
Minneapolis 5,
Minn.

ONAN ELECTRIC GENERATORS

▲ Mention Item NED-5274 when writing ▲

▲ Mention Item NED-5275 when writing ▲

Screws

Special kinds—difficult kinds—tight specifications—close precision—special heads or threads.

If it is a Screw—we have, can or will make it.

Write for easy reference, factual catalog.

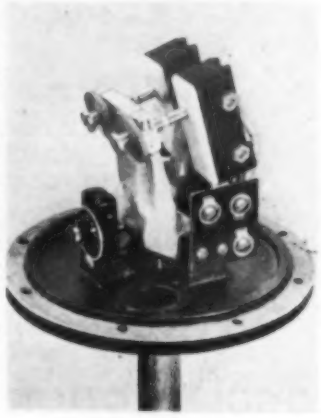
NEW ENGLAND SCREW CO.
KEENE, NEW HAMPSHIRE

MACHINE SCREWS · PLASTIC INSETS
SHEET METAL SCREWS · HOLDING PINS
MACHINE SCREW NUTS · SPECIAL RIVETS
ALL TYPES OF HEADS AND THREADS

▲ Mention Item NED-5276 when writing ▲

▲ Mention Item NED-5277 when writing ▲

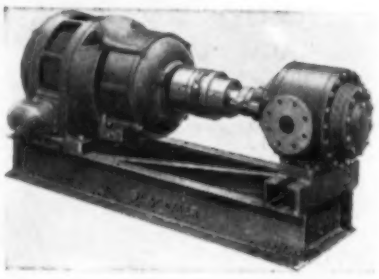
TEMPERATURE LIMIT SWITCH



Usable for any temperatures from −100 to 1400 degrees Fahr., Model VD-2C temperature limit switch is adaptable to wide range of industrial equipment. It features water and vapor tight sheet metal cover which is removed in illustration. Switch adjusting screws have positive lock for setting and main temperature can be locked with screwdriver. Wiring connections are made through ½-inch tapped hole in base. Made by **Burling Instrument** Co., 253 Springfield Ave., Newark, N. J.

▲ Mention Item NED-5278 when writing ▲

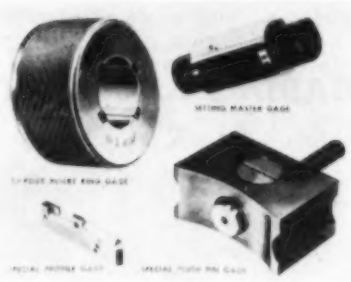
HIGH PRESSURE PUMP



Capable of handling discharge pressures of 500 pounds per square inch, this line of rotary pumps includes rated capacities of 50 and 90 gallons per minute. Standard motors with separate gear reduction drives or gearhead motors may be used. They can also be supplied for engine drive. Large sizes will be made available at later date. Pumps employ standard swinging vane construction. Units are designed to handle oils and similar liquids having lubricating properties. Made by **Blackmer Pump Co.**, 1976 Century Ave., Grand Rapids 9, Mich

▲ Mention Item NED-5279 when writing ▲

PRECISION GAGES



Standard or special gaging requirements can be met with this complete line of precision gages. Plug, ring, flat plug, profile, flush pin, snap and build-up gages are available in full range of standard sizes and tolerances. Standard gages are built to American Gage Design committee specifications and special gages to purchaser's blueprints. Illustrated are four gages from complete line.

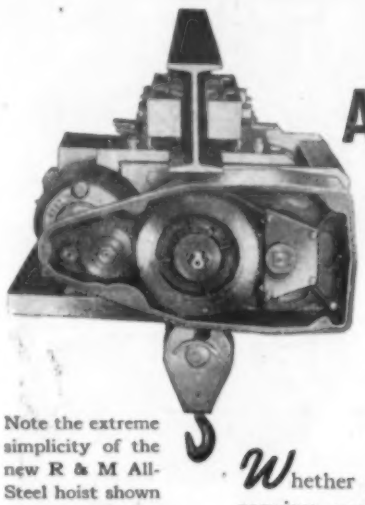
Gages are offered in any of three materials; steel, chromium plate or carbide. Chromium plate and carbide are designed for long production runs or for use with highly abrasive materials as they offer greater resistance to wear. Gages are held to extremely close limits. Rigid final inspection and aging by sub-zero process are utilized to insure absolute precision. Made by **Crescent Tool & Die Co.**, 1469 Electric Ave., Lincoln Park, Mich.

▲ Mention Item NED-5280 when writing ▲

NEW PRICE LISTS ON CARBIDES

▲ Mention Item NED-5281 when writing ▲

R & M ALL-STEEL HOISTS



Note the extreme simplicity of the new R & M All-Steel hoist shown above, with cover removed. There are no useless "gadgets" to cause trouble and reduce efficiency. All mechanism can be easily withdrawn.

★

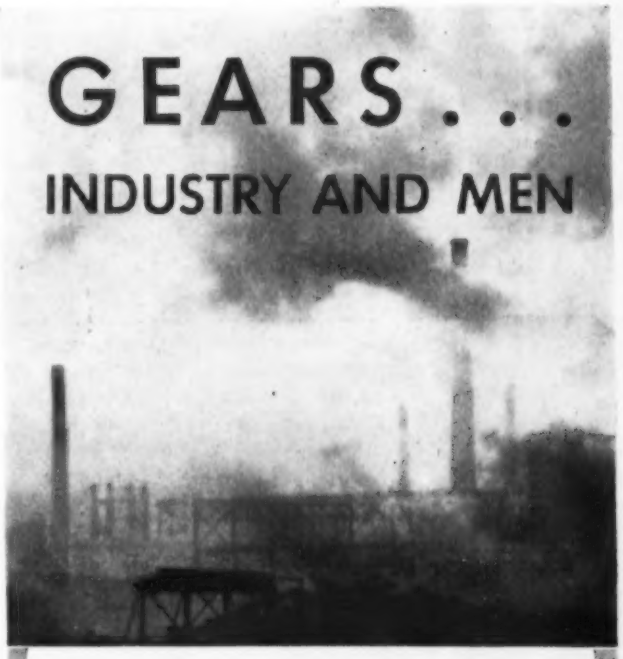
New design . . . simplified mechanism . . . for lower headroom, faster load handling, and greater operating economy!

Whether your material handling requires moving 1,000 pounds or 15,000 pounds, there's an R & M all-steel hoist that will do the job better. Get complete facts on the R & M line of all-steel hoists, including R & M's newest all-steel, low-headroom "production speeder" and "space saver."

Write now for Folders No. 800 and 801-NED. It will pay you to "take it up" with R & M—today.

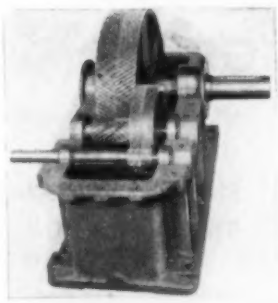
ROBBINS & MYERS, INC.
HOIST & CRANE DIVISION, SPRINGFIELD, OHIO

▲ Mention Item NED-5282 when writing ▲



Since 1888 . . . The Men of the D. O. James Organization have been a component part of the great expansion of American industry . . . Since Pearl Harbor . . . D. O. James Gears and Gear Reducers have been important components of the guns, ships and aircraft of our armed forces . . . The experience derived from our pre-war and war-time activities will be an important asset to American industry when Victory comes . . . That the post-war Gear and Gear Reducer requirements of American industry will be capably handled by our organization is proven by the testimony of the continued performance of D. O. James Gears and Gear Reducers of every type for every industrial application.

TODAY . . . D. O. James Gears and Men are ready to serve American industry.



D. O. James Continuous-Tooth Herringbone Gear Reducers are available in 38 sizes with a ratio range of 2 to 350:1 and from .63 to 1230 horsepower. Made in single, double and triple reduction.

D. O. James
ESTABLISHED 1888 MANUFACTURING CO.
1140 WEST MONROE STREET · CHICAGO 7, ILL.

▲ Mention Item NED-5283 when writing ▲

NO "SHORTS" IN DIALCO PILOT LIGHTS

New Improvement MAKES SOCKETS PERMANENTLY ANCHOR-TIGHT and FOOL-PROOF!

ORIGINATED BY DIALCO, ONLY DIALCO UNITS HAVE THIS VITAL IMPROVEMENT!

Note this rugged construction: Shell, bracket, and lugs are permanently ANCHOR-TIGHT and foolproof, preventing shorts. Dialco manufactures an extensive line of Pilot Lights and Socket Assemblies having this feature. Write for samples and Catalogue.

PLUS LAMPS: To speed production, we can supply any Pilot Light assembled with G.E. or Westinghouse Lamps.

DIAL LIGHT CO. of AMERICA, Inc.
900 BROADWAY
New York 3, N. Y.
ALgonquin 4-5180-1-2-3

▲ Mention Item NED-5284 when writing ▲

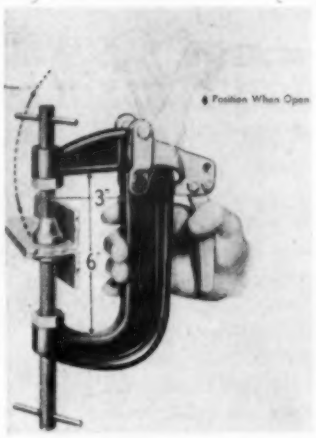
NEOPRENE GLOVES

Convenient for use in light assembly and inspection work and in food industries, this light weight Stanzoil glove is made of neoprene which resists damage from oils, acids and caustics, assuring longer life of glove and better hand protection. Glove is thin for finger tip sensitivity, yet is tough and durable. Fingers have non-slip finish for firm easy gripping of oily objects. Gloves are made in sizes 7 to 9. Made by **The Pioneer Rubber Co.**, 248 Tiffin Rd., Willard, O.

▲ Mention Item NED-5287 when writing ▲

TOGGLE ACTION CLAMP

Securely holding wide range of work, De-Sta-Co model No. 480 clamp has two adjustable clamping spindles which grip work at any selected point. This permits clamping over double angles and other irregular shapes. Clamping gap is readily adjustable to any thickness within clamp range. Each spindle is locked into place and remains at that exact setting until manually readjusted.

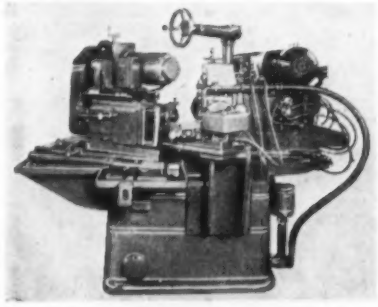


Quick clamping and release are effected by rapid toggle action. Upon release entire upper portion of clamp swings clear of work. Body of clamp is sturdy malleable iron casting. Threaded spindles are copper coated against welding spatter. Links and handle are plated against corrosion. By changing location of retaining bolts toggle handle may be adjusted to either straight out or downward position when clamp is locked. Clamp measures 6 inches with extra deep 3-inch throat. Made by **Detroit Stamping Co.**, 360 Midland Ave., Detroit 3, Mich.

▲ Mention Item NED-5288 when writing ▲

BEARING RACE GRINDER

Equipped with single standard Fitchburg Bowgage grinding wheelhead unit, this roller bearing race grinder has workhead which is adjustable from 0 to 75 degrees. Thus machine can be used for many other straight or taper grinding jobs. Grinder is completely automatic. Work is held to limits of 0.0002 inch in production. Workhead can be arranged either hydraulically or pneumatically for collet clamping or other chucking devices. Made by **Fitchburg Grinding Machine Corp.**, 1000 Falulah Rd., Fitchburg, Mass.



▲ Mention Item NED-5289 when writing ▲

L & R PRECISION CLEANING EQUIPMENT

Cleans METERS	for Baldwin Locomotive
Cleans RADIO TUBES	for National Union
Cleans CERAMICS	for Westinghouse
Cleans INSTRUMENTS	for American Airlines
Cleans BALL BEARINGS	for Miniature Precision
Cleans STARTERS	for Jack & Heintz

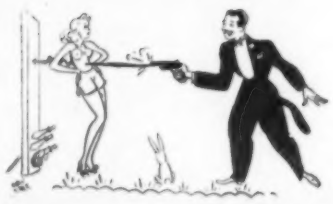
• ALSO USED BY ARMY AND NAVY AND MORE THAN 200 OTHER WAR INDUSTRIES

Write for Catalog Data

L & R MANUFACTURING COMPANY
577 ELM STREET • ARLINGTON, N. J.
CLEAN • RINSE • POLISH • DRY
with L & R in one complete, self-contained unit.

▲ Mention Item NED-5291 when writing ▲

"IT'S NO TRICK AT ALL WITH TORIT"



TORIT DUST COLLECTORS

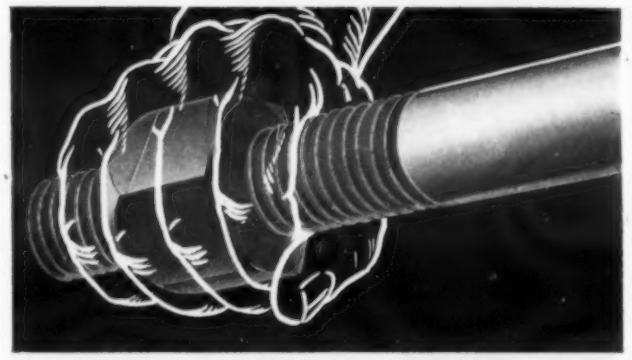
The reason why it is no trick with Torit to eliminate dust in all shops where grinding, cutting, and polishing wheels are used, is because they are compact, portable, self-contained units.

Torit Dust Collectors are adaptable to present or future production layouts. In one operation they trap dust and re-circulate clean air into the room. They protect machinery, speed production, and safeguard employees' health. For complete information write:

TORIT MANUFACTURING COMPANY
298 Walnut St.
St. Paul 2 Minn.

TORIT Dust Collectors SELF-CONTAINED UNITS

▲ Mention Item NED-5285 when writing ▲



IT'S THE VIBRATION-DEFYING GRIP THAT COUNTS

THE GRIP of the Stover Self-locking Nut is supplied *by the nut itself* It is the grip *of metal on metal*. It derives its power from the elasticity of its own metal for it is in one piece with no complicated assembly. It is a product of exceptional precision. Today it is eliminating the loosening effect of vibration on many types of war machines. Tomorrow it will do the same thing for machines of peace. Are you interested?

Send for descriptive literature, samples.

- meets Army and Navy Specifications
- does no harm to bolt threads
- can be used over and over without substantial loss of efficiency
- made in standard sizes and threads from ¼ inch to 1 inch
- costs no more than older-type less efficient lock nuts

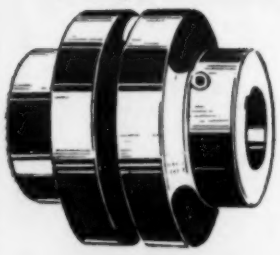
STOVER SELF-LOCKING NUT
"IT WON'T SHAKE LOOSE"

STOVER LOCK NUT AND MACHINERY CORPORATION
Easton, Penna., Bushkill Dr. • New York 17, N. Y., 101 Park Ave.
Detroit 2, Mich., General Motors Building
REPRESENTATIVES IN PRINCIPAL CITIES

▲ Mention Item NED-5292 when writing ▲

"WHY HORSE AROUND"

Specify CONGRESS *Drives*



Flexible Couplings for Motors up to 25 H.P.

V-Belt Pulleys
Variable Speed
Flexible Couplings
Step Cone Pulleys

★ ★ ★

Congress Standardized Drives are carried in stock for prompt delivery. Catalog contains full information. Write today.

CONGRESS DIE CASTING DIV.
CONGRESS TOOL & DIE CO.
ESTABLISHED 1914
3750 E. Outer Drive Detroit 12, Mich.

▲ Mention Item NED-5286 when writing ▲

Check your "Locker room" Problems this NEW, Space-saving way.

The NEW Peterson locker prevents crowding, saves valuable production space, and actually *doubles* coat room capacity — It accommodates the clothing, lunches and miscellaneous gear of 12 employees in just 5 square feet of space.

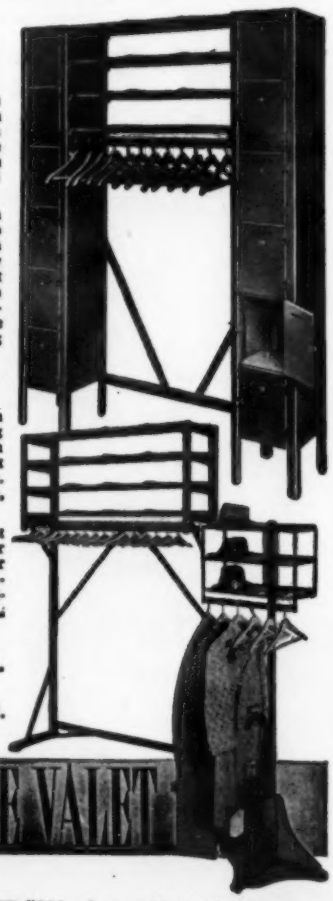
These easy-to-move units come in convenient 5-foot lengths to fit into otherwise waste space, and when placed near the point of work they prevent interrupting, inter plant traffic and locker room jams at rush hours. Also double units (back-to-back) provide ample locker space for 24 people in every 5 running feet.

Employees, too, like Peterson Locker Room Equipment

Each worker has a spaced "out in the air" coat hanger for keeping clothing dry, sanitary and "in press"; an individual ventilated hat shelf; and an individual one cu. ft. lock box for lunches, micrometers, instruments or personal effects.

Peterson Locker Room Equipment is designed for factory, shop or office—a complete line of locker units, wardrobe racks and non-tipping (6 or 12-person) costumers. Available Now.

WRITE FOR CATALOG
VOGEL-PETERSON CO.
"The Checkroom People"
1863 N. Wolcott Ave., Chicago 22, Ill.



The OFFICE VALET

▲ Mention Item NED-5290 when writing ▲

PN

SOCKETYPE CABLE TERMINALS

Exclusive Features

★ No Engineering Change Necessary
★ Saves 90% on Critical Material
★ Speeds Cable Assembly
★ Simplified Swaging
★ Interchangeability
★ Low Cost

Pat. Applied For

9 Sizes in Both Fork and Eye Types
1/16" • 3/32" • 1/8" • 5/32"
3/16" • 7/32" • 1/4" • 9/32"
and 5/16" Cable Sizes
Other Sizes Made to Order

Approved as interchangeable with B and C types of present standard AN 667 & 668.

POULSEN & NARDON INC.
Terminal Box 2398
LOS ANGELES 54, CALIFORNIA

▲ Mention Item NED-5293 when writing ▲

Why Not SEE Rather than feel

Weight of gage rests upon the upper anvil.

It is adjustable 0" to 1"

Work is located in center of contacts.

No lost motion. Movement of contact is transferred direct to Indicator.

FEDERAL INDICATOR SNAP GAGE with-Retractable Anvil Adjustable for Size No Lost Motion

The Model 1330 P-100 has many advantages — **The retractable anvil** makes it easier to apply, and it eliminates all excuses for marring the surface of highly finished workpieces. **It is easily adjusted** to any dimension within one inch and locked in place. **There is no lost motion.** The movement of the sensitive contact is transferred directly without error to the Dial Indicator. **The weight of the Gage and the inspector's hand rests upon the fixed or reference contact. It is thin:** only ¾" It is small; not over 6" at the longest point. It is light; weighs only 15 ozs. It reads in tenths (.0001"). Contacts are hard wearing Norbide (Made by Norton Co.) For more details concerning this modern snap gage write

FEDERAL PRODUCTS CORPORATION
1144 EDDY STREET PROVIDENCE 1, R. I.

FEDERAL
PRECISION MEASURING INSTRUMENTS

▲ Mention Item NED-5294 when writing ▲

SpeedWay

1/2" DRILL $32.50 With Jacobs Chuck

MORE DRILL for the Money

The last word in ½" capacity drills with every advanced feature. Powerful specially designed Universal Motor pours power thru triple reduction hardened steel gears. Forced air cooling prevents overheating. Housing is sturdy, light weight die casting. Self-aligning porous bronze bearings soak up oil like a sponge, release it slowly as bearing temperatures change. New type "in line" rear grip makes it natural to drill straight holes. One handle removable for close quarter drilling. Light weight (only 10¼ lbs.) means easy handling, yet it is so powerful that it will drill a ½" hole in iron with 300 lbs. weight on the bit. Jacobs key operated chuck. This is not a heavy duty production line tool, but it will give exceptional service to the garage man, maintenance man, contractor or installer.

SPEEDWAY MANUFACTURING COMPANY
1868 S. 52nd Avenue Cicero, Illinois

▲ Mention Item NED-5295 when writing ▲

PN SOCKETNUT ROD END TERMINALS

Exclusive Features

★ Made of Non-Critical Material
★ No Tightening Distortion
★ Reduced Service Stocks
★ Interchangeability
★ Prompt Deliveries
★ High Strength

Rods furnished on special order to customer's specifications

Pat. Applied For

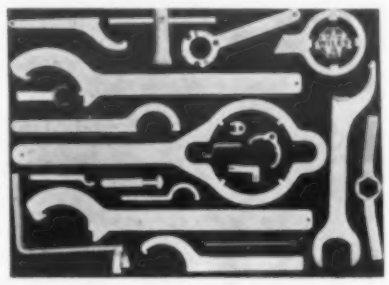
7 Sizes in Both Fork and Eye Types
4-40 • 10-32 • 1/4-28
8-32 • 12-28 • 5/16-24
3/8-24
Other Thread Sizes Made to Order

POULSEN & NARDON, INC.
Terminal Box 3398
LOS ANGELES 54, CALIFORNIA

New Specification Sheet and Folder Available to Industry Personnel

▲ Mention Item NED-5296 when writing ▲

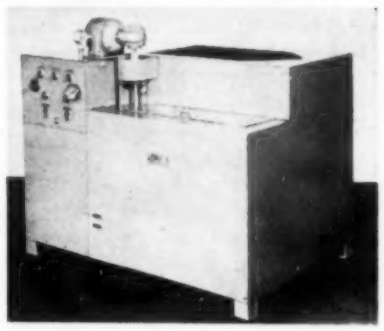
SPECIAL WRENCHES



Aircraft, marine, automotive and other apparatus requiring special tools for adjustment or assembling, as well as production equipment, can be serviced with special wrenches produced by fast, economical procedures by this company. Small quantities and hand tool production runs can be furnished where expense of special dies, broaches or drop forgings are not justified. Tools are made to customers' specifications in any steel required. Made by **R & W. Wiley, Inc.**, Dearborn & Bridge Sts., Buffalo 7, N. Y.

▲ Mention Item NED-5297 when writing ▲

MELTING & DIPPING TANKS

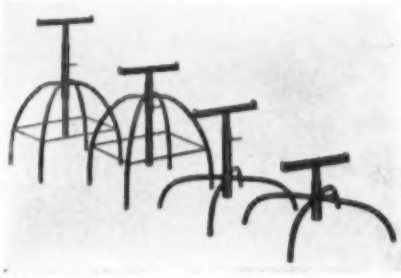


Furnished complete with all controls necessary to melt plastic and maintain it at required dipping temperature, ethyl cellulose melting and dipping tanks are available in several capacities and sizes. Machine shown is being used to dip spark plugs at rate of 4500 plugs per hour. This is model 60 and has capacity for 100 pounds of plastic per hour.

Indirect heat is employed. Thermostatic control is maintained over both heat exchange medium and plastic to insure that neither rises over maximum allowable temperature. Plastic is melted and preheated to proper temperature for dipping before entering dip tank. Plastic is circulated in such a way as to have constant level in dipping tank and continual removal of surface film that tends to form and air bubbles which arise from dipping of certain shapes. Made by **The Youngstown Miller Co.**, 1638 Hayes Ave., Sandusky, O.

▲ Mention Item NED-5298 when writing ▲

CONVEYOR SUPPORTS



Fully adjustable for height, type Q stands are designed for supporting sections of Buschman Roll-or-Wheel conveyors. Four different sizes are available for different height ranges. Smallest unit, No. Q1218, permits adjustment from 12 to 18 inches above floor level. Other models are higher with greater range of adjustment. They permit placing portable conveyor at any required level or incline for materials handling operations. Made by **The E. W. Buschman Co.**, 418 New St., Cincinnati 2, O.

▲ Mention Item NED-5299 when writing ▲

Save up to 50% on Operating Costs

FOR BETTER VENTILATION

More air from less horsepower! That's the simple reason why Propellair users are saving up to 50% on operating cost while saving, too, in space and installation expense. Propellair airfoil-section fan blades are marvels of efficiency; deliver a high-volume, axial-flow air stream for circulation or ventilation.

72-Page "How" Book YOURS FREE!

Get the facts on this modern equipment. There are types for mounting in ducts, windows and walls; on roofs and floors. This valuable book tells the *why* and *how* of industrial ventilation; gives solutions to all types of problems. Send for your copy today—it's free.

PROPELLAIR, INC. • Springfield, Ohio

▲ Mention Item NED-5300 when writing ▲

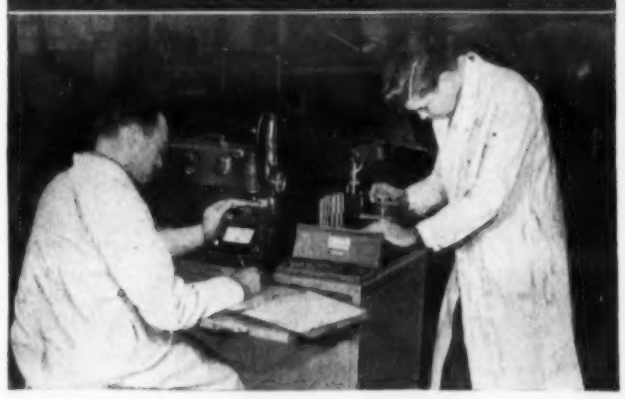
for efficient handling of SYNTHETIC RUBBER SLABS CAMBRIDGE WIRE BELTS

In the manufacture of Synthetic Rubber there is found wide use of Cambridge Woven Wire Belts. Their open mesh permits treatment simultaneously with the movement of the product — their porosity speeds draining and drying. Our engineers offer skilled counsel on any continuous belting installation. Write us, FREE TECHNICAL BOOK on request.

THE CAMBRIDGE WIRE CLOTH CO.
CAMBRIDGE 13, MARYLAND

▲ Mention Item NED-5301 when writing ▲

Inspection on Location with DoALL Mobile Unit



A complete inspection department on wheels, to check parts right at the machine or bench. Errors are caught where they start and hundreds of dollars in wasted man hours and material are sayed.

The Unit consists of an 83-piece set of DoAll Gage Blocks, 20 auxiliary instruments, surface plate, Metron Comparator Gage, a file for records, desk space and collapsible seat. Occupies only 24 x 42" floor space.

DoALL GAGE BLOCKS

Doing a Great Big Job

These 83 little jewels of industry can turn an ordinary machine shop into a manufacturer of precision parts accurate to within ±.000002" (2 millionths of an inch).

Decide right now to make your facilities more valuable to our war effort and for later peacetime needs.

Send for 64-page Handbook on the modern use and care of Gage Blocks. It's free.

CONTINENTAL MACHINES, INC.
Manufacturers of DoAll Contour machines and Surface Grinders
Offices in Principal Cities
1314 S. Washington Ave. Minneapolis 4, Minn.

▲ Mention Item NED-5302 when writing ▲

SARCO ELECTRIC CONTROLS

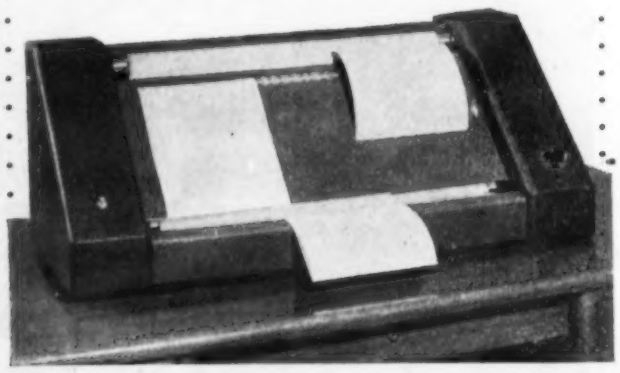
The most exacting temperature controls in chemical and plating plants are handled satisfactorily with simple, inexpensive Sarco electric controls.

The Sarco line includes room thermostats, limit controls, aquastats, immersion types, and motor valves for heating, air conditioning and industrial applications. Ask for Catalog No. 1025.

SARCO SAVES STEAM — SARCO COMPANY, INC. 475 Fifth Avenue, New York 17, N. Y. SARCO CANADA, LTD., 85 Richmond St. W., TORONTO, ONT. 176

▲ Mention Item NED-5304 when writing ▲

NEW DESK TOP PHOTOGRAPHIC PRINTER SERVES DUAL PURPOSE

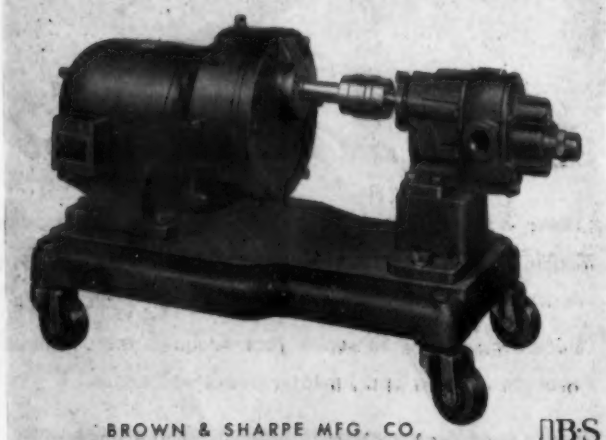


This new, inexpensive Bruning Model 2 BW Copyflex Continuous Printer is used for reproducing anything typed, printed, photographed or drawn. Improved, 2-way light source makes it easy to change at will from Black and White Prints to Copyflex reproductions. Ideal for copying photographs, drawings, posters or for intensifying worn or soiled tracings. Only 39 inches long and 16¼ inches wide, the Model 2 fits into desk-top space. Operates on 110 volt, 60 cycle A.C. current. For full information, write Charles Bruning Co., Inc., 4700 Montrose Avenue, Chicago 41, Illinois. 2349-357

▲ Mention Item NED-5305 when writing ▲

ROLL It To WHERE You Use It!

A pump set on casters offers the advantage of mobility. It can serve a group of different installations or provide transfer service for several stations. Send for pump catalog of complete line of geared, vane, centrifugal and motor driven pumps.



BROWN & SHARPE MFG. CO. Providence 1, R. I., U. S. A. BS

GEARED • VANE • CENTRIFUGAL • MOTOR DRIVEN

BROWN & SHARPE PUMPS

▲ Mention Item NED-5306 when writing ▲

COMPARTMENT DOOR LOCKS

Designed for compartment doors of truck and utility bodies, as well as for lockers and other doors, Recesso locks have recessed handle plates and folding, rattleproof handles. They

are easily installed by fitting center case into simple cutout and attaching elements by wood or metal screws or bolts. Line contains 14 different locks, including dead bolt units, dead bolt locks factory-fitted with key-operated cylinder locks, two types of slam locks with key cylinders and single point engaging slam lock. Recesso handles are available for practically any installation. Made by **Eberhard Mfg. Co.**, 2734 Tennyson Ave., Cleveland, O.

▲ Mention Item NED-5307 when writing ▲

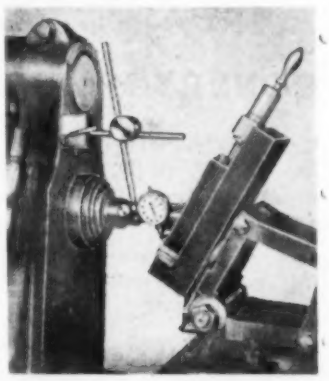
RADIUS WHEEL DRESSER

Performing work of radius dresser as well as dressing corrected radius on wheel for grinding compound and compound-complex forms, No. T-124 angle correcting radius dresser is used on flat forms, tools and similar units. It operates on direct-reading principle and both angle scales are easy to read. All exposed unpainted parts are chrome plated to insure against stain and rust. Device is constructed with hardened steel wear plate on under side of base to prevent chipping and wear on cast iron body. It is fitted with Timken taper roller bearings and has hardened one-piece steel spindle arm. Made by **The U. S. Tool & Mfg. Co.**, 6906 Kingsley, Dearborn, Mich.

▲ Mention Item NED-5308 when writing ▲

MAGNETIC INDICATOR BASE

Adaptable to any type or make of dial test indicator, this magnetic indicator base eliminates need of any clamp and allows easy access to places that would be impossible to reach with other types of bases. It will hold indicator tightly to iron or steel surfaces. Strength of magnet is more than ample to support indicator at extreme end of rod in any position. Magnetic charge is guaranteed to remain at full strength for 5 years or base will be recharged free. Base is composed of two powerful Alnico magnets. This magnetic alloy is claimed to be many times more powerful than usual magnetic steel. Base is made by **Main Electric Co.**, 1462 E. Main St., Rochester 2, N. Y.



▲ Mention Item NED-5309 when writing ▲

YOUR Truck-Man will move any skidded load of one ton or less, in shorter time, for less money, than any hand operated truck can do. Two speeds. Gasoline power. Hydraulic lift. Used by railroads, airports, food processors, foundries, tanneries, manufacturers—coast to coast. *Send for bulletin.*

truck-man

ONE TON CAPACITY $675.00 F.O.B. Jackson, Michigan

a product of YARD-MAN, INC. 1414 WEST GANSON JACKSON · MICHIGAN

▲ Mention Item NED-5310 when writing ▲

HOW TO KEEP 15,000 TRUCKS ON THE GO

The Railway Express Agency learned one way to keep trucks on the go way back in 1927. It was by using Elastic Stop Nuts. And they've used them ever since.

These nuts increase safety and cut down mishaps and maintenance costs. They go on like ordinary nuts—need no auxiliary locking devices. They can be taken off and put back on time and time again and still lock. Nothing—even severe vibration—shakes them loose.

If you have a fastening problem, write. Our engineers will gladly recommend the correct Elastic Stop Nut.

ESNA Trade Mark of Elastic Stop Nut Corporation of America

ELASTIC STOP NUTS Lock fast to make things last UNION, NEW JERSEY AND LINCOLN, NEBRASKA

▲ Mention Item NED-5311 when writing ▲

This man at the bench is not a Hero with medals and no glory awaits him when his job is done. Unseen and unsung, he is on the job every day, working with hot glass, behind a fierce flame, with delicate fingers and skill, building one of the finest thermometers for his country's needs.

In your Post War plans, temperature will play a major role and you can be certain of ultimate results in your manufacturing processes, IF you give serious thought NOW to using only GOOD Thermometers.

PALMER thermometers give you:

1. Precision and Guaranteed Accuracy;
2. Sturdiness and long service;
3. A bright RED column, so easy to see, with "Red-Reading-Mercury".

Clip this ad as a reminder. *(Catalog on request.)*

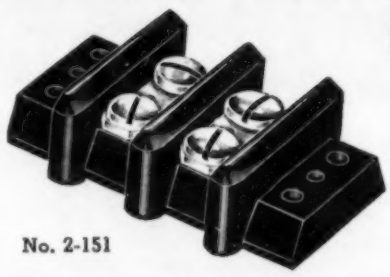
THE PALMER CO. Mfrs.

Industrial, Laboratory, Dial & Recording Thermometers

2523 Norwood Ave., Cincinnati, Norwood, O. — *Canadian Plant:* King & George Sts., Toronto

▲ Mention Item NED-5312 when writing ▲

JONES BARRIER STRIPS



Solve Most Terminal Problems

No. 2-151

• A compact sturdy terminal strip with Bakelite Barriers that provide maximum metal to metal spacing. Prevent direct shorts from frayed wires at terminals.

6 SIZES—Cover every requirement. From 3/4" wide and 13/32" high with 5-40 screws to 2-1/2" wide and 1-1/8" high with 1/4"-28 screws. Jones Barrier Strips will simplify as well as improve the electrical connections of your products.

Three lines of Jones Multi-Circuit Plugs and Sockets fulfill every connection requirement. Hundreds of standard terminals.

Write today for catalog listing complete line of Jones Electrical Connecting Devices.

HOWARD B. JONES CO.
2460 George Street, Chicago 18, Ill.

▲ Mention Item NED-5313 when writing ▲

A GENERAL WIREBOUND BOX IS "PART OF THE PRODUCT"

THE two generators above are securely blocked in a General Wirebound container which is "part of the product" until it reaches the user. In addition to providing protection, General Box Company engineers specified a chemically-treated jacket and wax-dipped blocks so that the jacket and blocks would not cause moisture and develop rust on the generators. Another example of how General Box Company can solve shipping problems for you tomorrow.

General BOX COMPANY

General Offices: Corner of Dearborn and Illinois Streets, Chicago, Illinois. District Offices and Plants: Brooklyn, Cincinnati, Detroit, E. St. Louis, Kansas City, Louisville, Milwaukee, New Orleans, Sheboygan, Winchendon. Continental Box Company, Inc.: Houston, Dallas.

▲ Mention Item NED-5314 when writing ▲

Fairbanks-Morse Scales Help Salvage Vital War Materials

Today every ounce of critical raw material is vital to the war effort.

That's why a well-known optical company, manufacturing precision instruments, installed efficient, time-saving equipment for expediting the control and movement of valuable salvaged materials.

They did it with the aid of a fast weighing, accurate, and reliable Fairbanks-Morse Scale, equipped with electric Printomatic. This Printomatic records the material, designation, gross weight, tare and net weight, on duplicate sales slips and on a roll tape. The possibility of human error and controversy is eliminated.

Fairbanks-Morse Scales can be fitted into your production lines to save time, prevent errors, and speed production. In many cases they can accomplish that which cannot be accomplished with any other equipment.

For complete information write Fairbanks, Morse & Co., Fairbanks-Morse Building, Chicago 5, Illinois.

BUY WAR BONDS

FAIRBANKS-MORSE Scales

DIESEL ENGINES · PUMPS · MOTORS · GENERATORS · WATER SYSTEMS · SCALES · STOKERS · FARM EQUIPMENT · RAILROAD EQUIPMENT

▲ Mention Item NED-5315 when writing ▲

MOISTURE DETERMINATOR

Moisture content of powders or granular materials such as foods, soaps and plastic molding compounds is readily determined with this TAG dielectric type moisture meter. This device performs work which cannot be handled by other electrical conductance instruments. It performs precise measurement of dielectric property of test sample. Extremely sensitive, this unit is easy to handle. Moisture determinations can be made in less than two minutes.

It is available for operation on 110 or 220-volt; 25 or 50/60-cycle alternating current. Made by **C. J. Tagliabue Mfg. Co.**, Park & Nostrand Aves., Brooklyn 5, N. Y.

▲ Mention Item NED-5316 when writing ▲

SAFETY GOGGLES

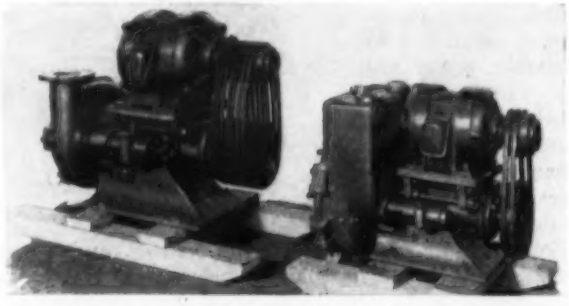
Fitted with clear, flat Super Armorplate lenses, these small size eyecup safety goggles for women chippers protect eyes from hazards of flying objects coming from any direction. Goggles are light in weight and have 44.6 millimeter eye size. Each eyecup is designed individually to fit orbit of eye.

Broad bearing surfaces assure comfort. Goggles are low set for wide angle vision and have insulated ball chain bridge which can be adjusted easily and quickly. Headband is likewise adjustable. Made by **American Optical Co.**, 1492 Mechanic St., Southbridge, Mass.

▲ Mention Item NED-5317 when writing ▲

CENTRIFUGAL PUMPS

Featuring overhead mounted motor as shown, Amsco-Nagle centrifugal type pumps are available in several sizes. Claimed advantages include more accurate speed than is possible with



previous drives, simplified speed changes, readily accessible motor and protection of motor against flooding. Design requires minimum of floor space for installation. Made by **American Manganese Steel Div.**, American Brake Shoe Co., 389 E. Fourteenth St., Chicago Heights, Ill.

▲ Mention Item NED-5318 when writing ▲

Looking for a really small switch?

Here's the G-E Switchette

This is its actual size

- ★ Ratings up to 10 amperes
- ★ Can be operated manually or by cam, lever arm, or bellows
- ★ Two terminal arrangements for ease of mounting
- ★ Available in more than 200 forms.

Because of its small size, versatility, and toughness, this switch is widely used by designers for many control functions on aircraft, where dependability and resistance to vibration are essential. Ideal for selector switches, transfer switches, limit switches—in short, wherever you need to make or break an electric contact.

Write for your copy of our new Switchette Catalog (GEA-3818B) which gives dimensions, ratings, and description.

GENERAL ELECTRIC

▲ Mention Item NED-5319 when writing ▲

PORTABLE ELECTRIC BLOWERS

PLUG IN the TORNADO at any electric outlet. Instantly you have a 295 m.p.h. blast of air that swiftly cleans motors and machinery, at low cost. Prevents motor burnouts, lowers power costs, reduces repairs and replacements. No extending of hose line. No damaging condensed moisture. Air from TORNADO is clean and dry. Keep your motors and machinery running. Clean them with the Tornado.

Write for details and FREE TRIAL Offer

BREUER ELECTRIC MFG. CO.
5106 N. RAVENSWOOD AVE., CHICAGO 40, ILL.

▲ Mention Item NED-5320 when writing ▲

Veteran in Search of a Peacetime Future

This is a Lear Actuator.

It is now busy operating flaps, shutters, landing gears and other things on Uncle Sam's aircraft.

Its design and construction presented many challenges. It had to be light. It had to be small. It had to be strong.

Such a unique device, the tiny motor that drives it, and all the other 250 Lear products must have an important future in peacetime developments.

That is why we are telling you about them now. We want to find jobs for these able veterans.

And we want you to know that such products and the kind of engineering thinking and production technique that made them possible are available.

LEAR AVIA INC. PIQUA · OHIO

▲ Mention Item NED-5321 when writing ▲

Rawhide

The best "soft" hammers and mallets are rawhide — tough, resilient, long-lasting C/R mechanical rawhide. They strike effective blows without battering or marring . . . without fatiguing re-coil. They hold their true striking surfaces. Sizes and weights for every need. Hammers are malleable iron with replaceable C/R Rawhide insert faces.

Write for Catalog Sheets.

CHICAGO Rawhide MFG. CO.
1287 ELSTON AVE. ★ CHICAGO, ILLINOIS.

▲ Mention Item NED-5322 when writing ▲

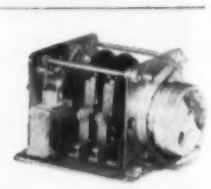
"DOWN TIME" the SABOTEUR of Machine Hours

• It's hard to get more machines, you say? Okay, then make every machine now work harder and produce more. How? Well, the first step is to find out if any precious time is now being wasted by machines *standing idle* at odd moments. And the way to do *that* is to clamp a little SERVIS RECORDER on each one of your machines. Then you'll get the whole story—see chart above. Write for our folder—"A Busy Plant." The Service Recorder Co., 1375 Euclid Ave., Cleveland, 15, Ohio

The Servis Recorder
SHOWS UP ALL IDLE TIME!

▲ Mention Item NED-5323 when writing ▲

Cramer Multi-Contact Timers



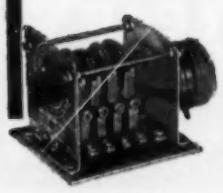
Type MC D

With solenoid operated start mechanism for remote control.

These can be controlled to go through a complete cycle or any part and stop.

Reclosing momentary start button will either continue or repeat cycle, as desired. Can be arranged so that in event of power interruption, it is necessary to again press button to continue cycle, or after power is restored to automatically continue cycle of operation.

Send for Bulletin 3000.



Type MC 4

The R.W. CRAMER COMPANY Inc.
CENTERBROOK CONNECTICUT

▲ Mention Item NED-5324 when writing ▲

Typical repairs and patches made with Flexco HD Rip Plates.

THOUSANDS of men in industrial plants, mines and mills all over the country are doing just what this man is doing. They are cutting costs by repairing conveyor belts with Flexco HD Rip Plates.

WRITE TODAY FOR BULLETIN F-100 that shows how easy it is to repair rips, to strengthen soft spots and to put in patches by using Flexco HD rip plates. The bulletin also shows how to make tight butt joints in both conveyor and elevator belts with Flexco HD Belt Fasteners. These fasteners are made in six sizes. Furnished in special analysis steel for general use and in various alloys to meet special conditions.

Flexco HD Rip Plate

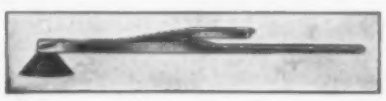
Flexco HD Belt Fastener

FLEXCO STEEL LACING CO.
4664 Lexington St., Chicago, Ill.

FLEXCO HD BELT FASTENERS
Sold by supply houses everywhere

▲ Mention Item NED-5325 when writing ▲

PARTS LIFTER



Injuries to fingers and hands are prevented by use of style D-44 Ipco safety parts lifter. It is convenient for lifting, feeding and positioning sheets in stamping machines and die presses without inserting hands or fingers within danger zone and for transferring blanks from piles or stacks, especially when oily and greasy and difficult to grasp with fingers. Device may be used on all non-porous materials, flat or curved surfaces.

Lifter is made of aluminum with oil resistant rubber cup. Vacuum releases instantly when trigger is depressed. Overall length is 15 inches. Made by **Industrial Products Co.**, 2807 N. Fourth St., Philadelphia 33, Pa.

▲ Mention Item NED-5326 when writing ▲

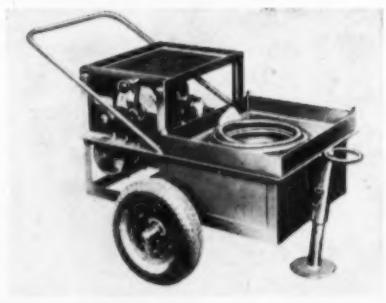
OUTDOOR WELDERS

Specifically designed for use in shipyards and similar outdoor locations where exposure to weather is common, two outdoor current welders are equipped with automatic control which functions to reduce output to less than 30 volts whenever arc is not in operation, yet provides full power for welding instant arc is struck. The 500-ampere welder has current range from 100 to 625 amperes, while range of 300-ampere welder is from 60 to 375 amperes.

Protection against entrance of rain, snow and sleet is provided by dripproof construction of all openings in top of enclosure and by sealed window over current indicator. Ventilating openings serve both to shed water and keep air velocity low. Finish on all internal parts provides protection against corrosion from moist air. Other features of these welders include built-in power factor improvement, fingertip adjustment, stepless current control and fan-forced ventilation. Made by **General Electric Co.**, Schenectady, N. Y.

▲ Mention Item NED-5327 when writing ▲

PORTABLE POWER UNIT



Adaptable for use wherever auxiliary power is required remote from regular power sources, this portable power unit has full capacity to start aircraft engines, check and test radio equipment and gun turrets and recharge batteries while installed. Unit is powered by 4 horsepower gasoline engine. Fifty-ampere, 30-volt generator is mounted direct on engine crankshaft. Full 480-ampere, 1500-watt capacity enables unit to serve large aircraft as well as small. Power output is taken directly from two 12-volt batteries, 240-ampere hours each. This feature enables units to be serviceable in case of temporary failure or damage to engine. Made by **Pacific Airmotive**, Dept. NED, 409 N. Brand Blvd., Glendale 3, Calif.

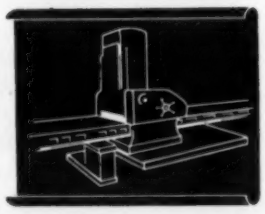
▲ Mention Item NED-5328 when writing ▲

HOW BOMBER TURRET Maneuverability ADDS TO THE Flexibility of MACHINE TOOLS

By helping gunners to "Draw a bead" instantly on rapidly moving tragets

PULLMORE CLUTCHES

have developed new features that will increase the wide range of speeds and maintain more constant feeds in machine tools. Our engineers will be glad to help you solve your power transmission control problems through the proper application of Pullmore Clutches.



Send for These Power Transmission Bulletins

They give capacities, dimensions and specifications. Contain application diagrams. Show how PULLMORE exclusive features are being used by product designers to help give post-war products competitive advantages.

Rockford Drilling Machine Division Borg-Warner Corporation
312 Catherine Street, Rockford, Illinois, U. S. A.
Pullmore Clutches are sold by Morse Chain Co., offices in principal cities

▲ Mention Item NED-5329 when writing ▲

FASTER PRODU
FOR LIGHT WEIGHT AUXILIARY MOTORS

Twenty times the speed of a previous opera *in cyli polishing . . .*

At least a six-fold time-saving in finishing *rods .*

— these are results achieved through the adoption of -cushion Abrasives by a manufacturer of lightweight auxiliary en

Production speed-up—improved product-quality, are the ere Bri ployed for close-tolerance burring, finishing and polishing se versa made for both manual and machine operations, eliminate duction the grind and the buff and frequent duce the Brightboy's original rubber and abrasiv la give and better.

Ask your dealer for Brightboy—and fo g, price duction literature. Brightboy dealer re tives a will be glad to work with you o product

BRIGHTBOY INDUSAL
Weldon Roberts Rubber Compa Newark

WELDO BER
Bright

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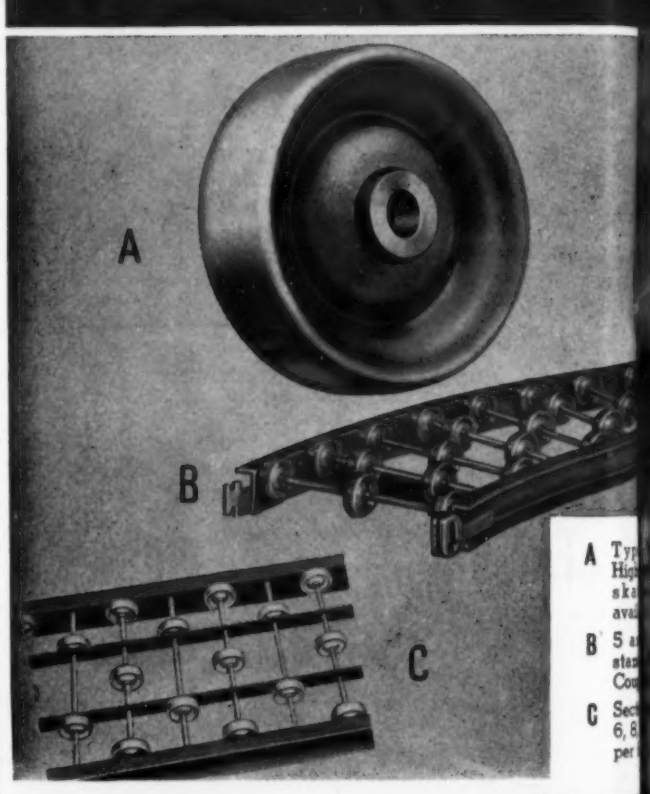
TYPE 115 WHEL



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UCTION
RS AT and AFLOAT

perat n cylinder dome

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n of cushioned Brightboy
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the ere Brightboy is em-
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nate duction steps between
quent duce the final polish.
brasiv ls gives results faster

nd fo g, price list and pro-
ler re tives and service men
you production problems.

IDUSAL DIVISION
Compa Newark 7, New Jersey

Brightboy-finished cylinder dome, connecting rod, wrist pin and link rod.

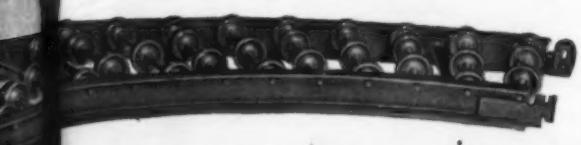
Left: Brightboy-polished cylinder dome; right: dome before polishing.

DO BERTS
t b o y
REG. U.S. PAT. OFF.

Item when writing ▲

EL CONVEYERS

For warehouse application and for the loading and unloading of trucks and cars, or for general light conveying work, these sections are ideal. They are rugged and light and can stand a reasonable amount of abuse. 90° Curves and attractive tripod type supports are standard equipment. Ask for a new bulletin and data sheets covering this Wheel Conveyer.



Typ Wheel—
Hig ty roller
ska wheel
ava
5 ections
sta niversal
Co plied.
Sec able with
6, 8 2 wheels
per

Mathews Conveyer Company
ELLWOOD CITY
PENNSYLVANIA

Item when writing ▲

ld Cooling

CONTROLLED cooling of hot forgings combined with an efficient Materials Handling system was the double-barreled question for which our engineers were asked to find a single answer. The Insulated Skid Box pictured here was their recommendation and actual service tests have since proved its correctness.

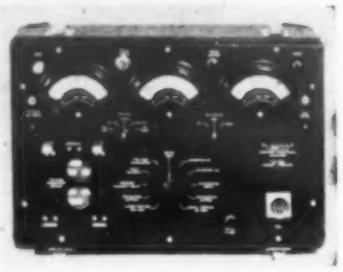
Layers of special high-temperature insulation material encased between heavy gauge steel inner and outer walls of the box provide almost thermostatic control (50 degrees per hour in this case). Furthermore, the slow cooling provided by the insulation anneals the forgings, thus eliminating an operation.

Your Materials Handling problems will be carefully engineered whether your requirements be Skid Platforms, Boxes, or Pallets. Write The Union Metal Manufacturing Company, Canton 5, Ohio.

UNION METAL
Materials Handling Equipment

ion Item when writing ▲

ELECTRICAL ANALYZER

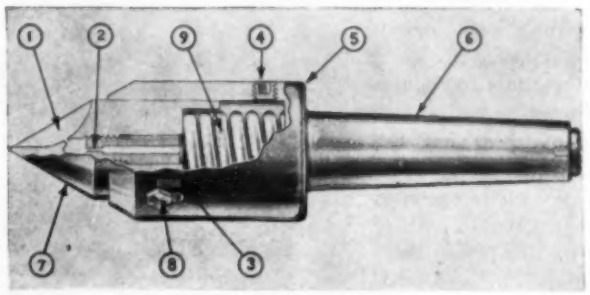


Electrical and wiring troubles on aircraft can be analyzed and located by Umco compact, light weight, portable testing unit. It can also be used for checking open circuits, short circuits and measuring resistance of any circuit element. Tee adapter is inserted in circuit to be tested, selector switch on unit is turned to that specific circuit and test can be made completely. Unit complete with all accessories weighs approximately 25 pounds. Made by **United Hydraulic Mfg. Co.,** Los Angeles, Calif.

▲ Mention Item NED-5333 when writing ▲

COMPENSATING LATHE CENTER

Designed for pressure tool machines and work which must be held within close tolerances, New Era lathe center eliminates guesswork in arriving at correct center tension. It main-



tains this tension by automatically compensating for expansion of work and by providing adequate center lubrication. Only movement in device is gradual one-way longitudinal movement induced by expansion of work. Point is replaceable. Because of positive lubrication, holes are not burned in work during high speed machining operations. Exact concentricity is claimed to be assured at all times. Sizes range from No. 1 to 5 and are priced from $19 to $36. Made by Cesco Products. Distributed by **Diamond R Agencies,** Box 311, Pasadena 17, Calif.

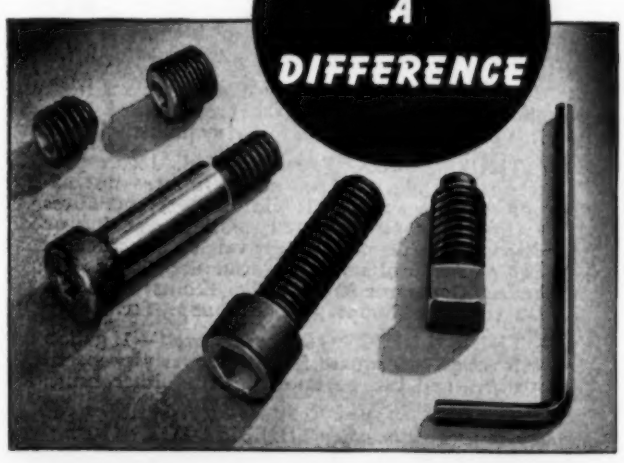
▲ Mention Item NED-5334 when writing ▲

ROACH GUN

Designed especially as insect killer for industrial and institutional use, Whizooka roach gun is furnished loaded for instant use. Device is pump-action, canister gun, 2½ inches in diameter and 11 inches long. It contains supply of Lethane A-70 and shoots cloud of deadly dust into cracks and runways to wipe out roaches, ants, silver fish and bedbugs. This powerful insecticide kills faster than sodium fluoride and retains deadly properties longer than pyrethrum. It is harmless to animals and human beings. Made by **R. M. Hollingshead Corp.,** 870 Cooper St., Camden, N. J.

▲ Mention Item NED-5335 when writing ▲

THERE IS A DIFFERENCE



Chicago "SAFETY PLUS" Socket Screw Products have great holding power. They are not only accurate, but are tough and strong. Outstanding features are—electric furnace alloy steel—clean, true heads—sharp, full threads—accurate sockets—and exceptional holding power. Use Chicago "SAFETY PLUS" Products—you'll find *there is a difference.*

These fine Products are sold only thru Authorized Distributors

THE CHICAGO SCREW CO.
1026 S. Homan Ave. Chicago 24, Ill.

▲ Mention Item NED-5336 when writing ▲

FOR MORE WAR WORK WITH FEWER WORKERS
***Use* CURTIS AIR HOISTS**

You can release workers for other jobs, reduce worker fatigue, and, at the same time, speed up production—where almost any lifting problem is involved—with Curtis Air Hoists.

Curtis Air Hoists provide these advantages:

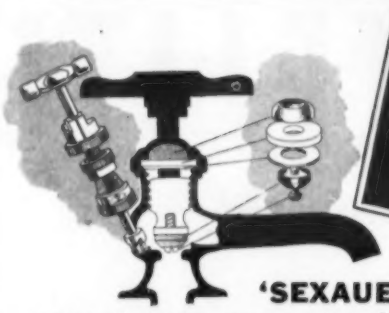
- Low first cost and low operating expense
- Only two moving parts
- Smooth, fast, accurate control
- No chains to stretch or wear out
- Capacities up to 10 tons
- Pendant or bracketed types

For full information, write today for free booklet, "How Air Is Being Used in Your Industry."

FOR VICTORY BUY UNITED STATES WAR BONDS AND STAMPS

CURTIS PNEUMATIC MACHINERY DIVISION
of Curtis Manufacturing Company
1979 Kienlen Avenue, St. Louis, Mo.

▲ Mention Item NED-5337 when writing ▲



WHERE DEPENDABILITY COUNTS

'SEXAUER' REPAIRS

stop costly leaks, conserve irreplaceable plumbing fixtures, save water, fuel, critical materials and manpower

DON'T DISCARD OLD, WORN FAUCETS! Re-form their rough, scored seats to a smooth, round "saddle" surface with the 'Sexauer' Pat'd Precision Tool (above)—better than new, for long, trouble-free dependable service.

"EASY-TITE" PAT'D 300° F. WASHERS withstand extreme hot water temperatures. Fabric-reinforced like a tire, they won't split or mush out of shape. Dependable "Easy-Tites" outlast ordinary washers 6 to 1, help protect valuable fixtures.

'SEXAUER' materials are advertised regularly in the Saturday Evening Post. This highly specialized line is standard with leading maintenance engineers and master plumbers.

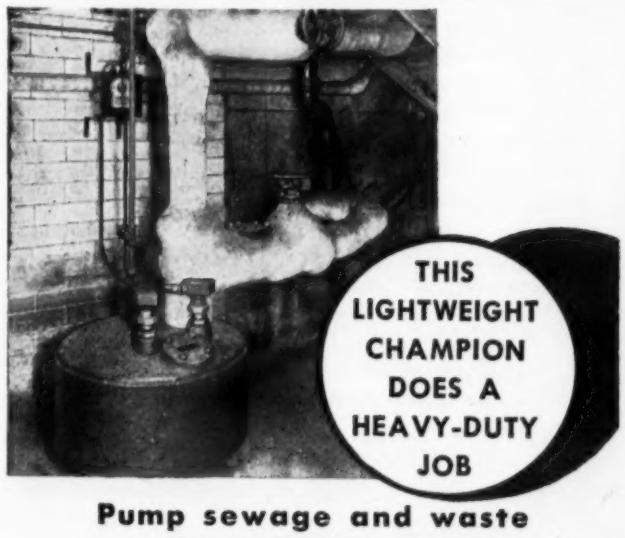
THE 'SEXAUER' SYSTEM saves time, trouble and return trips. This skillful assembly of 'Sexauer' Precision Tools and 1,400 Triple-Wear Replacement Parts, loaded according to *your specific needs,* provides all necessities for dependable one-trip repairs.

SEND FOR A NEARBY 'SEXAUER' TECHNICIAN
He'll survey your needs without obligation—point the way to new operating and upkeep economies, whatever the age or style of your fixtures. Over 1,000 Modern 'Sexauer' Maintenance Parts and Suggestions are listed in the big 64-page 'Sexauer' Catalog. Send for your FREE copy.

SEXAUER
SPECIALISTS IN PLUMBING AND HEATING MAINTENANCE MATERIALS FOR 23 YEARS

J. A. SEXAUER MFG. CO., INC.
Dept. N 9, 2503-5 3rd Ave., N. Y. 51

▲ Mention Item NED-5338 when writing ▲



THIS LIGHTWEIGHT CHAMPION DOES A HEAVY-DUTY JOB

Pump sewage and waste by steam or air

YEOMANS EXPELSOR

This simple, sturdily built unit will deliver the quiet, workmanlike, taken-for-granted performance you expect of it—

- No maintenance—no stuffing boxes, no moving parts to need attention.
- Hermetically sealed receiver—no noxious, explosive gases.
- No costly wet well.
- Operates by compressed air or steam.
- Based on a principle proved by over a half-century of reliability.

Any capacity from 30 g.p.m. up—smallest size handles solids that will pass through 4-inch piping.

Write for full information.

YEOMANS BROTHERS CO.
1447 DAYTON ST. • CHICAGO 22, ILLINOIS

▲ Mention Item NED-5339 when writing ▲

PROMPT DELIVERY

When planning to purchase voltage control equipment remember that SECO offers the highly desirable combination of a quality product and prompt delivery.

POWERSTAT variable voltage transformers are manufactured under supervision backed with years of research and engineering . . . insuring the proper design for any application up to 75 KVA.

Send for Bulletin 149 DN and 163 DN

SUPERIOR ELECTRIC CO., 363 LAUREL ST., BRISTOL, CONN.

SUPERIOR *Electric Company*

▲ Mention Item NED-5340 when writing ▲

BAKELITE

TRADE-MARK

Today . . .

Two-Fisted Gun Grips

THESE GRIPS, molded from a BAKELITE impact-resistant phenolic plastic, give aircraft gunners instant command of turret rotation, gun firing, and the microphone system. They are miniature switchboards—alive with electrical controls and ready for instant action. But at the same time they are lightweight, tough to withstand impact, and highly dielectric. Temperatures ranging from —70 deg. F. to 180 deg. F. do not affect their form or operation because they are dimensionally stable. Their fine, lustrous, integral finish withstands the roughest handling.

The designing and molding of gun turret control grips closely parallels that of producing peacetime appliances, such as flatiron handles. And both call for the same combination of physical, electrical, and thermal characteristics in the construction material. The right answer for thousands of other products has come from the use of the *right* BAKELITE plastic, plus the co-ordinated teamwork of designer, molder, and materials supplier.

Our field engineers and development laboratories will gladly work with you on any product that you wish to improve or that is now in the planning stage. Write for Booklet 16-M "Bakelite Molding Plastics."

TRADE MARK

BAKELITE CORPORATION, 30 E. 42 St., New York 17

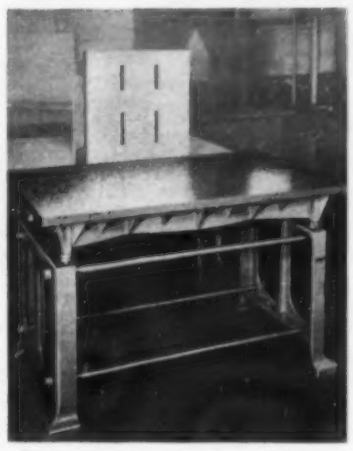
Unit of Union Carbide and Carbon Corporation

UCC

Molding Plastics

▲ Mention Item NED-5341 when writing ▲

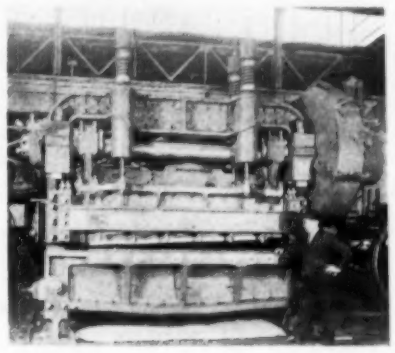
COMBINATION SURFACE PLATE



Entire surface plate area can be used for precision work on this combination surface plate which has 24 x 32-inch plate bolted and pinned to side of 35 x 60-inch surface plate. Both plates are hand scraped to within 0.0002 inch of flat. Smaller plate is scraped on top, face and both sides which are square with each other, as well as with larger plate. Meehanite castings are used. Supporting table is provided as shown. Special sizes can be supplied to specification. Made by **Barco Scraping Co.**, 1975 E. Sixty-fifth St., Cleveland 3, O.

▲ Mention Item NED-5342 when writing ▲

HEAVY DUTY SHEAR



Weighing 55 tons and capable of cutting plates up to 1 inch thick, this 100-inch plate shear has improved safety features. It is equipped with six pneumatically controlled hold-downs. Previous models used springs or hydraulic pressure for these clamps. Controls are regulated so that, regardless of whether or not pressure on button control is released, shear makes one complete cycle and then comes to rest. This heavy duty shear was built for steel mill in India and shipment was arranged by British Supply Mission. Made by **Mackintosh-Hemphill Co.**, 903 Bingham St., Pittsburgh 3, Pa.

▲ Mention Item NED-5343 when writing ▲

FOOT CONTROL UNIT

Developed for use with line of burr removing tools, this foot control unit permits operator to work more efficiently, faster and more carefully. It eliminates operator fatigue and speeds burring by allowing operator to work in position and at angle most comfortable and convenient for him. Hands remain free for handling parts. Unit is adaptable for use on any drill press, converting it into efficient burring machine. Control is available for immediate delivery at low cost. Made by **Nobur Mfg. Co.**, 906 W. Orange Dr., Los Angeles, Calif.

▲ Mention Item NED-5344 when writing ▲

AVAILABLE AGAIN THUR-MA-LOX* #10

The war took this unexcelled, heat resisting aluminum paint off the market for sometime. Now it is once more available for many industrial uses.

THUR-MA-LOX* #10 is unexcelled as a protection for all types of metal surfaces not exposed to the weather. It withstands temperatures as high as 1200°F without spalling, cracking or discoloring. It is used extensively on Superheated Equipment (insulated or uninsulated), Engine Exhausts, Generator Shells, Boiler Fronts, Flues and Ducts, Steam Pumps, Hot Oil Pumps, Etc.

THUR-MA-LOX* #10 covers well—1 gallon will cover 300 square feet of properly prepared surface—and can be applied with either brush or spray gun.

Ask us how to apply THUR-MA-LOX* #10 *successfully on outside surfaces.*

Write today for literature describing the uses and advantages of THUR-MA-LOX* #10.

*Patented

THE M. W. KELLOGG COMPANY
Exclusive Sales Distributors
225 BROADWAY NEW YORK 7, N. Y.
Representatives in: Chicago, Ill. • Detroit, Mich. • Pittsburgh, Pa. • Los Angeles, Calif.

THURMALOX COMPANY • *Manufacturers* • DOYLESTOWN PA.

▲ Mention Item NED-5345 when writing ▲

Coil Stock feed it faster with LITTELL AUTOMATIC CENTERING REELS

At Left—No. 3 LITTELL Automatic Centering Reel. For easy, rapid, efficient, economical handling of coiled stock. Capacity, 300 lbs. Takes coils max. width 6½", max. O.D. 48", I.D. 8½" to 21". Motor-driven Reels for handling coils up to 6,000 lbs. Coil Cradles for coils up to 20,000 lbs.

KEEP your punch presses running steadily, at top speed, by using coil stock unreeled with LITTELL Ball-Bearing Automatic Centering Reels. They provide a free-flowing loop of stock and permit continuous feeding without waste.

Made in plain or motor-driven types for handling coils from 100 to 6,000 lbs. Equipped with the latest devices for feeding at desired speeds. Handle stock in various widths and thicknesses. Reel can be tilted at any angle. Adjustable in height. Vertical or horizontal operation. Coil Cradles can be provided for handling stock up to 20,000 lbs.

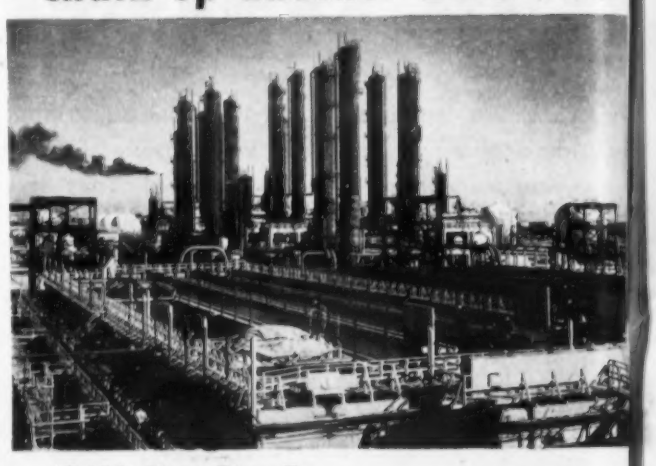
Besides Reels, LITTELL makes a complete line of press-room equipment, including—Roll Feeds, Feeding and Straightening Machines, and such essential safety devices as Pres-Vac Safety Feeders and Air-Blast Valves. Leading war-production plants use LITTELL.

ASK FOR BULLETIN

F.J. LITTELL MACHINE CO.
4161 RAVENSWOOD AVE., CHICAGO 40, ILL.

▲ Mention Item NED-5346 when writing ▲

Chalk up another BIG one



ADSCO Piston-Ring Expansion Joints . . the only slip type Joint that can be unpacked and repacked under full operating pressure were included in the several hundred ADSCO Expansion Joints installed in the Port Neches, Texas plant of the Neches Butane Products Company. Write for Bulletin No. 35-15D.

ADSCO PISTON RING EXPANSION JOINT

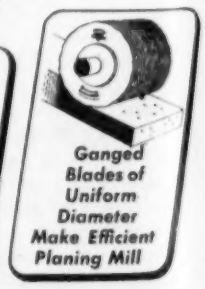
AMERICAN DISTRICT STEAM COMPANY
NORTH TONAWANDA, N. Y.

▲ Mention Item NED-5347 when writing ▲

The new DI-MET RIMLOCK Corrugated Type

for cutting-off, milling, grooving glass, ceramics and all similar hard, brittle non-metallic materials

Low Cost Form Cutters



Ganged Blades of Uniform Diameter Make Efficient Planing Mill

Greater Clearance Provides Freer Cutting

LATEST development in diamond wheels is the DI-MET Rimlock—with corrugated rim, a diamond abrasive blade having alternating groups of teeth canted to right and left to provide extra side clearance. These new Rimlocks have several advantages that help solve special cutting problems. Because of reduced side wall contact, the blades are extra free cutting, side clearance allows ready circulation of coolant and greatly increases the chip area. Interlocking of teeth permits ganging several blades to make a planing cutter, and, by altering effective blade diameters and adjusting spacers, special form milling cutters are easily assembled. Note the possibilities illustrated above for cutting, milling and grooving glass, ceramics, porcelain, semi- and fully-vitrified clays and all similar hard, non-metallic materials with the new corrugated type Rimlocks.

FELKER MANUFACTURING CO., 1125 Border Ave., Torrance, Calif.

MANUFACTURERS OF DIAMOND ABRASIVE WHEELS

▲ Mention Item NED-5348 when writing ▲

Dust created by grinders in the plant of a large pharmaceutical company is thoroughly filtered from the air in the Sly Dust Filter shown above. This keeps the plant spick and span, saving materials and providing good working conditions. • This is but one of over 5000 installations in operation today. Sly Dust Filters are collecting lll kinds of dust in 57 industries. What is *your* dust problem? Ask for Bulletin 98.

SLY THE W. W. SLY MFG. CO.
4748 TRAIN AVE., CLEVELAND 2, OHIO
INDUSTRIAL DUST CONTROL

▲ Mention Item NED-5349 when writing ▲

New Answers to **Piston Ring** *Problems!*

IN THE Ramco Piston Rings now being supplied by the millions for replacement use in Industry and Transportation are embodied advancements in precision manufacture and design refinements which make possible new high standards of performance.

Contributing to these advances are Ramco's war production experience and developments in the manufacture of aircraft piston rings for military aviation requiring precision finishes in the millionths of an inch.

For the name of your nearest distributor of Ramco Rings, write Ramsey Accessories Mfg. Corp., 3720 Forest Park Blvd., St. Louis 8, Mo., U.S. Plants at St. Louis, Fruitport. Canadian Plant at Windsor, Ont.

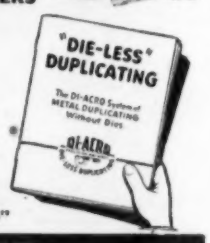
RAMCO
Especially Engineered PISTON RINGS
For your Specific Requirements for Replacement . . . for Original Equipment

▲ Mention Item NED-5350 when writing ▲

METAL *Stampings* DUPLICATED WITHOUT DIES

If you desire to save time and critical materials on production of metal stampings or other small parts, then the DI-ACRO System of "Metal Duplicating Without Dies" merits your consideration. It is based on the rapid and accurate production of formed parts with DI-ACRO Shears, Brakes and Benders. All duplicated work is accurate to .001". These precision machines are adaptable to an endless variety of work, and ideally suited for use by girl operators. For short runs your parts are processed in a matter of hours instead of waiting weeks for dies.

Send for This Catalog
"DIE-LESS DUPLICATING"
It illustrates many stampings or parts made without dies, gives full details on DI-ACRO machines and shows how they may readily be adapted for various applications. Request your copy now.



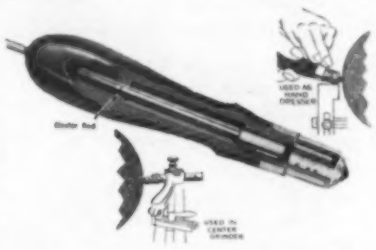
◄ Pronounced "DIE-ACK-RO"

DI-ACRO PRECISION MACHINES DIE-LESS DUPLICATING
O'NEIL-IRWIN MFG. CO.
954 EIGHTH AVE. SO., MINNEAPOLIS 15, MINN.

▲ Mention Item NED-5351 when writing ▲

DIAMOND DRESSER TOOL

Adaptable for both hand and machine dressing, Handl-Nib double purpose diamond dresser tool consists of ejector type handle in combination with Big-Hed diamond nib which is held firmly in handle for use on steady rest of grinder wheel. Dress is obtained by rolling across face of wheel at slightly inclined angle. To release nib for use in adaptor rod of Norton center grinder or any other machine taking 7/16 shank nib, it is only necessary for operator to hold handle and press down on ejector rod. Thereupon nib pops loose from handle. When further use as hand tool is required, nib may be pressed by hand back into handle socket. Tool is available with resetable nibs containing diamonds in sizes of 2 carats and larger. Made by **Diamond Tool Co.**, 938 E. Forty-first St., Chicago 15, Ill.



▲ Mention Item NED-5352 when writing ▲

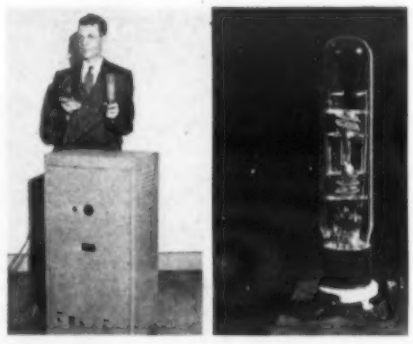
FLAMEPROOF COATED CLOTH

Having high tensile strength at abnormally high temperatures, lightness in weight, and high tear resistance, synthetic rubber coated glass cloth is also resistant to effect of fire, oil, gasoline, grease, water, mildew and insects. It is unaffected by most acids and alkalis.

Aircraft usages include sealing of joints in metallic hot-air ducts and for gun bore aligning targets. It is available in single and double coated types in gages from 0.006 to 0.040 inch with tensile strengths of 165 to 800 pounds per inch. Developed by **United States Rubber Co.**, 1207 Rockefeller Center, New York, N. Y.

▲ Mention Item NED-5353 when writing ▲

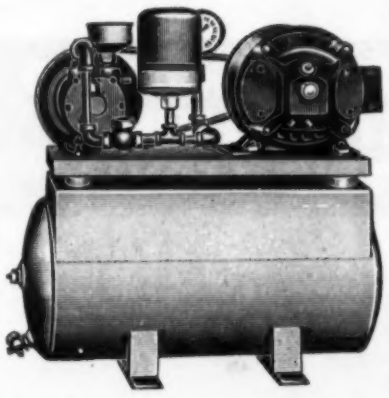
MODULATING LIGHT



Developed to provide steady light as source for printing sound track on film, this modulating light consists of high pressure mercury vapor lamp with associated controls. It has many other applications in fields of photofinishing and of processing microfilm where steady light source whose intensity can be readily controlled is definite requirement.

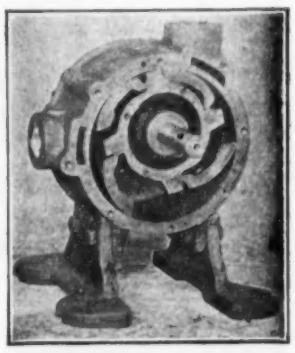
Light operates on 85 watts input with specially designed heater coil to permit operation within wide intensity range of from one to ten. So flexible is light that it can be changed instantaneously from low to high intensities and vice versa. It replaces incandescent lamps previously used which are much less efficient in photoactinic range and produce hissing sound on film track. Electronic control of light is provided through use of electronic tubes and photoelectric eye so arranged that film densities automatically change light intensity as required. Developed by Lester F. Bird in research laboratory of **Hanovia Chemical & Mfg. Co.**, 90 Chestnut St., Newark, N. J.

▲ Mention Item NED-5354 when writing ▲



VACUUM OR PRESSURE ON TAP
LEIMAN BROS. NOISELESS
Air Pumps
START AND STOP AUTOMATICALLY

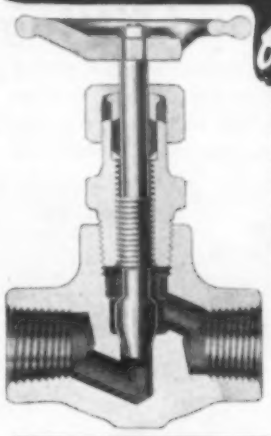
for pump-priming, agitating, impregnating, cooling, operating gas machines, furnaces, blow pipes, vacuum holding chucks, gas boosting, testing instruments, sandblasting, paper feeding.



LEIMAN BROS. 167 CHRISTIE ST. NEWARK, N. J.

▲ Mention Item NED-5355 when writing ▲

GREATER STRENGTH *for* Gage, Meter, Dead End and Instrument Lines, Pump Vents and Diesel and Gas Engines.



FOR services where bar stock valves are often used, Edward Fig. 152 gage valves have the advantage of much greater strength. Because they are drop forged steel, the bodies of Edward gage valves have sounder structure and greater strength than bodies machined from a bar. For non-shock service up to 4000 lb at 150 F and in steam service up to 600 lb at 750F. Complete details in Edward Catalog No. 102. Write for your copy.

DIMENSIONS AND RATINGS

SIZE	1/8"	1/4"	3/8"	1/2"
End to end—Globe	1 13/16	1 13/16	2 1/4	2 3/4
Center to end—Angle	29/32	29/32	1 1/8	1 3/8
Center to top—Open	3 5/8	3 5/8	3 7/8	4
Port diameter	1/8	3/16	1/4	3/8
Weight—lb	1	1	1 1/4	1 1/2

4000 lb AT 150 F
600 lb AT 750 F
475 lb AT 1000 F

THE EDWARD VALVE & MFG. CO., INC.
1240 WEST 145th STREET • EAST CHICAGO, IND.

Edward Valves
Forged Steel & Cast Steel

▲ Mention Item NED-5356 when writing ▲

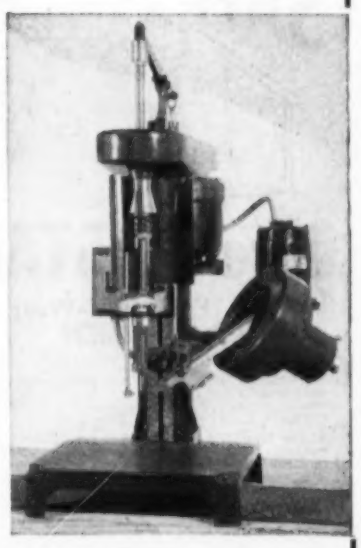
YOU CAN'T BEAT THIS SCREWDRIVER
24 Hour Production Schedules Maintained

THINK OF IT
Drives No. 2, 4 or 6 screws, from 3/16" to 3/4" long, at one second each.

ALL SCREWS DRIVEN TO A UNIFORM TENSION

No Marring of Heads

Send Sample Assemblies For Estimates.



DETROIT POWER SCREWDRIVER CO.
2819 West Fort Street Detroit 16, Michigan

▲ Mention Item NED-5357 when writing ▲

Send for this FREE CHART

Decimal Equivalents. Accurate to four places. Signaled in three colors for maximum speed in locating decimal equivalent of fraction. Saves time and avoids errors. Yours at no cost or obligation. Just send us your name, title and address.

See our Catalog in Sweet's File for Product Designers

JOHN HASSALL, INC.
Specialists in Cold-Forging Since 1850
398 Oakland Street
Brooklyn 22, N.Y.

SPECIAL NAILS RIVETS SCREWS
Hassall

▲ Mention Item NED-5358 when writing ▲

PLASTIC

Pipe, Tubing, and Fittings

Keeping abreast of new developments in the piping field, Grinnell now offers Plastic Pipe, Tubing and Fittings for the various applications where its special advantages provide improved performance and economy.

Write or call the Grinnell office nearest you.

GRINNELL
WHENEVER PIPING IS INVOLVED

GRINNELL COMPANY, INC.
Executive Offices, Providence 1, Rhode Island
SALES OFFICES: Atlanta 2, Ga., Charlotte 1, N. C., Chicago 9, Ill., Cleveland 14, Ohio, Houston 1, Texas, New York 17, N. Y., Minneapolis 15, Minn., Philadelphia 34, Pa., St. Louis 10, Mo., St. Paul, Minn.

▲ Mention Item NED-5359 when writing ▲

SO-LO's
Long-Wearing

Dura-Val STAIR TREADS

Look, Feel, and Wear Like RUBBER
Require No Priority!

At low cost, you can make stairs foot-sure . . . reduce accident hazards . . . prevent loss of time, production, and manpower . . . with DURA-VAL STAIR TREADS.

These treads have essential advantages of rubber, yet require no priority. Tough, resilient—won't crack on stairs. Waterproof and washable. Ribbed for safety. Available in black, in both flat type and curved "nosing" type which assures extra protection. Smart looking, easy to apply.

Standard flat tread is 9 x 18". Standard "nosing" tread in two sizes—9 x 18" and 9 x 24". Extra-sizes on special order. Immediate delivery on any desired quantity. At your supply house, or write Dept. A-9.

Fully Guaranteed By
So-Lo Works, Inc.
Loveland Ohio

CURVED "NOSING" FOR EXTRA PROTECTION

Tough, Resilient WON'T CRACK ON STAIRS

▲ Mention Item NED-5360 when writing ▲

Saws Holes Thru 1⅛" Steel

Built to withstand the terrific peripheral strains of heavy duty use in portable drills, on drill presses, on lathes. Composite construction—high speed steel cutting edge welded to unbreakable alloy steel body. Heavy heat treated hexagonal arbors with heavy drive pins and high speed steel pilots. Teeth have sufficient set for deep drilling—to 1⅛". Sizes from ⅝" to 4½" diameter.

Write for Catalog

ARMSTRONG-BLUM MFG. CO.
5700 Bloomingdale Ave., Chicago, 39, U. S. A.

"I be Hats ... Lafayette St., N. Y. 12

▲ Mention Item NED-5361 when writing ▲

PAINT STRIPPING TORCH

Providing enough heat so that painter can soften and peel paint as fast as he wants to work, No. 4-P paint stripping torch leaves surface clean and dry. It has flat nozzle and produces ribbon flame. Torch lights instantly and will not blow out.

Unit weighs only 2¼ pounds and operates on Insto-Gas. It is attached to portable cylinder by means of 5-foot hose. Hooks are provided for convenience in hanging torch on ladders. Available on MRO AA-5 priority. Made by **Insto-Gas Corp.**, 1904 E. Jefferson Ave., Detroit 7, Mich.

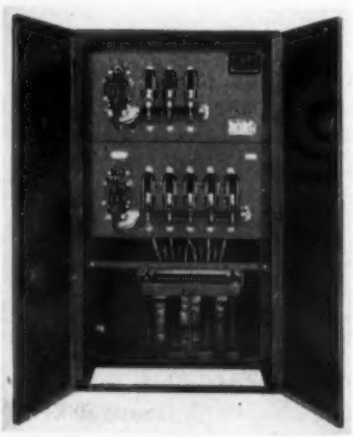
▲ Mention Item NED-5362 when writing ▲

STAINLESS-CLAD SHEETS

Recommended for such applications as steel jacketed kettles, cold storage room linings, table tops where corrosion resistance is prime requisite, various cooking utensils, numerous items of hospital equipment and storage vessels, light gage stainless-clad steel sheets are now being manufactured by company through addition of new production equipment. Thicknesses from 16 to 12-gage can be produced in widths from 24 to 50 inches and in lengths up to 120 inches. The 18-gage can be furnished in all above widths and up to 96 inches in length. Polished sheets are available in all sizes up to 48 inches. Twenty per cent of total thickness of these clad sheets is Jessop stainless steel. Made by **Jessop Steel Co.**, 555 Green St., Washington, Pa.

▲ Mention Item NED-5363 when writing ▲

MOTOR STARTER



Protecting motors from sustained overloads, locked rotor condition, single phasing and overloading from too frequent starting, ARC magnetic, reduced voltage cage motor starter has accurately calibrated, thermal overload relay. Starter is built for general industrial applications and is available for control of motors from 5 to 2500 horsepower, up to 5000 volts, 3 phase, 50 or 60 cycles.

Reduced voltage, two-point starting is obtained with built-in autotransformer, utilizing accurate, synchronous motor driven, adjustable timing relay for transition from starting to running position. Units rated through 800 horsepower have built-in autotransformers; above 800 horsepower autotransformers are furnished for separate mounting. Interrupting capacity rating of starter is ten times motor's full load current. Made by **Allis-Chalmers Mfg. Co.**, 6900 Norman St., Milwaukee 1, Wis.

▲ Mention Item NED-5364 when writing ▲

RESTORE ROCK-HARD PAINT BRUSHES TO ACTIVE SERVICE

BEFORE **AFTER**

This side of the photo shows actual condition of a hard-as-rock paint brush before Prestorer cleaning.

This side was Prestorer cleaned. The two halves were tied together and this is an unretouched photo of the two parts.

Use PRESTORER Paint Brush Rejuvenator

No Fire Hazard—No Toxic Fumes—Easy to Use

A new non-hazardous brush cleaning solution that makes old hard-as-rock brushes soft, pliable and useful . . . no fuss, no boiling, no scraping nor combing. PRESTORER can be used over and over again.

Write for illustrated descriptive folder

Distributor Franchise Available

TECHNICAL DEVELOPMENT LABORATORIES
DEPT. 52 • P.O. BOX 65 • TENAFLY, N. J.

▲ Mention Item NED-5365 when writing ▲

Swiss Pattern Files
FOR YOUR FINE FILING WORK

NUCUT Swiss Pattern Files are used by makers of precision instruments, tools, clocks and watches, die sinkers, gunsmiths, silversmiths, jewelers, model and pattern makers. Consult the chart for selecting the right file for *your* work.

SHAPE	CROSS SECTION	TEETH AND TAPER	GENERAL USES
Hand		Uniform in width. Tapered in thickness. Two flat sides are double cut. One edge is double cut; other edge is safe or uncut.	Flat Surfaces
Pillar		Similar in shape to Hand File, but narrower. Two flat sides are double cut. Both edges are safe or uncut.	Flat surfaces, slots
Warding		Tapered in width. Double cut on flat sides and edges.	Slots
Square		Tapered. Double cut.	Corners, holes
Round		Either uniform or tapered. Double cut.	Corners, holes
Half-Round		Tapered in width and thickness. Flat and half round sides are double cut.	Corners, holes
Crossing		Oval shape, with radius of one side greater than the other. Double cut.	Corners, holes
Crochet		Flat in shape, with rounded edges. Double cut on flat sides and edges.	Slots

Awarded to the Newcomerstown, Ohio, Plant

HELLER BROTHERS COMPANY
Newark 4, New Jersey • Newcomerstown, Ohio
America's Oldest File Manufacturers — Good Tools Since 1836

HELLER NUCUT WAVY TEETH FILES

PAT. NO. 2027031

▲ Mention Item NED-5366 when writing ▲

One man—or one woman, for that matter—can do the work of four men in material moving with the revolutionary HYDROLECTRIC motorized lift truck. Users faced with man-power losses to the military, are able to "make up" the loss on this one-to-four ratio, thus releasing three men for other effective duties.

The HYDROLECTRIC is the original creation of the Stuebings, originators of Lift Trucks in 1910. It costs only one-third as much, weighs only one-third as much as other "rider" type trucks of equal capacity. User recommendations based on 15 years of 8-hour-day performance. Write for immediate information.

LIFT TRUCKS, INC.
2425 SPRING GROVE AVENUE, CINCINNATI 14, OH

▲ Mention Item NED-5367 when writing ▲

Shallcross
KELVIN-WHEATSTONE BRIDGE
Type 638-2

0.0001 ohms to 11.11 megohms

WIDE MEASUREMENT RANGE
in a single instrument

Combining both Kelvin and Wheatstone bridges, this popular Shallcross instrument provides a resistance measurement range from 0.0001 ohm to 11.11 megohms in a single portable unit. Widespread use is proving unexcelled for laboratory and school work, maintenance, many forms of production line testing, field investigations, etc. When used as a Wheatstone bridge for measurements between 1 ohm and 1 megohm, the normal accuracy is better than 0.3%. Low resistance measurements using the Kelvin range utilize current and potential terminals to eliminate lead and contact resistance. The accuracy of Kelvin measurements is normally 3% or better.

Ask for details on Kelvin-Wheatstone Bridge Type 638-2.

SHALLCROSS MFG. CO.
Engineering • Designing • Manufacturing
DEPT. D-94 COLLINGDALE, PA.

▲ Mention Item NED-5368 when writing ▲

Northern
HI-LIFT ELECTRIC HOISTS
168-Hour Week Workers

They stay on the job because they have the strength and construction quality. One piece welded frames—turned and ground shafts—large size roller bearings—machine cut heat treated gearing—splash lubrication. All parts readily accessible for maintenance that usually isn't needed.

Hi-Lift feature makes better use of headroom—capacities 1000 lbs. to 15 tons.

Low headroom
Write for Literature

NORTHERN ENGINEERING WORKS, 2603 Atwater St., Detroit, Mich.

CRANES *Northern* HOISTS

▲ Mention Item NED-5369 when writing ▲

PROFIT BY "ABRASIVE" SUPERIORITY

For example, Abrasive Company Snagging Wheels grind *more*, grind *longer*—and for Less! Grinding Wheel COST is determined by Grinding Wheel PERFORMANCE! Write on your letterhead for full details on "Abrasive" Snagging Wheels and Abrasive Company's patented Red Streak Flanges. Please request Form ESA-62

COMMANDING QUALITY

OUTSTANDING RESULTS

ABRASIVE COMPANY
Tacony and Fraley Sts., Philadelphia 37, Pa.
DIVISION OF SIMONDS SAW AND STEEL CO.

▲ Mention Item NED-5370 when writing ▲

DRAWER TYPE OVENS

Designed specifically for preheating bakelite prior to forming into distributor caps, these ovens may be used for finish baking small items or can be converted to other uses at mod-

erate cost. With exception of front panels containing drawers, ovens were assembled from standard units. Drawer panels are of same overall size as regulation doors. Thus if nature of work should change in future, ovens can be converted into usual shelf type.

Heated air is circulated on down draft principle, applicable when work consists of quantities of small parts. As further aid to free circulation and elimination of heat losses, drawers are constructed of expanded metal and close against asbestos gaskets. Temperatures up to 500 degrees Fahr. are under fully automatic control and ovens may be connected to exhaust piping if necessary. Made by **Koch Industrial Equipment Inc.**, 2124 Pennsylvania St., Evansville, Ind.

▲ Mention Item NED-5371 when writing ▲

VOLTAGE REGULATOR

Offering high rating in proportion to size, model 1H Transtat alternating current voltage regulator is adaptable to table, panel or gang mounting for polyphase or simultaneous single phase control. Machined die cast brush arm affords heat dissipation, provides simple means of changing brushes and protects commutator against short circuiting contact with brush holder. Shaft is independent of brush arm assembly and can be removed by withdrawing one pin. Plastic base prevents accidental lead shorting.

Vinyl acetal insulated wire, synthetic phenolic resin impregnated core and coil, corrosion resistant fittings and dual mounting arrangement for open delta three phase control are features. Nominal rating of model 2½A is 300 volt-amperes with input of 115 volts and output of 0 to 115 volts at 2.6 amperes on single phase operation. Voltage increments are 0.4 through range of control. Units do not cause wave form distortion or alter power factor of load circuit. Made by **American Transformer Co.**, 190 Emmet St., Newark 5, N. J.

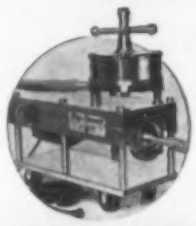
▲ Mention Item NED-5372 when writing ▲

BEAVER No. 371

—a new FULLY ADJUSTABLE Threader for pipe up to ¾" and bolts up to 1". *Write for Catalog 44*

BEAVER PIPE TOOLS, INC.
944 HENRY AVE. WARREN, OHIO

▲ Mention Item NED-5373 when writing ▲



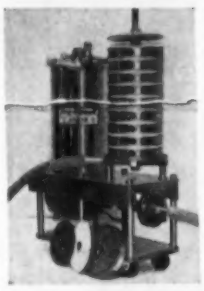
Alsop
FILTERS FOR ALL LIQUIDS

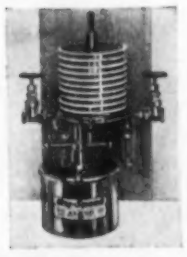
"SEALED DISC" FILTERS for Water, Acids, Chemical solutions, etc.

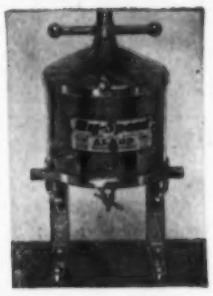
"DISC-PAK" FILTERS for Fuel, Diesel, Turbine, Transformer, Hydraulic, Machine Oils and Coolants.

Alsop filters have no superior in the simple and economical operation and finished result, of completely cleansing liquids of dirt, rust, moisture and other impurities.

Send for our book on Filtration







ALSOP ENGINEERING CORP.
39 Main Street Milldale, Conn.

▲ Mention Item NED-5374 when writing ▲

ABOVE—Milling machine vise, with inserts of Kennametal at points "A" and "B".

UPPER LEFT—Galled surfaces of steel jaw and screw.

LOWER LEFT—Kennametal inserts minimize wear.

The superiority of Kennametal for wear-resistant purposes is graphicly demonstrated in this milling machine vise. The steel parts of the jaw and screw (enclosed in box "A") wore and tore under the twisting force exerted by the clamping mechanism. Thin discs of Kennametal—one brazed to the end of the screw, another recessed into the jaw at the abutting point—permit the jaw to be closed securely, and opened readily, with less effort. The performance of the vise has been further improved by inserts of Kennametal in the sliding surfaces on which the work rests, at points marked "B".

The high hardness of Kennametal (78 Rockwell C), and its unique non-galling property, provide resistance to abrasive wear that is up to 100 times that of steel. Kennametal's modulus of elasticity—2 to 3 times that of steel—minimizes possibility of deformation. Its unusual dimensional stability makes creep negligible.

Kennametal is available in a variety of standard shapes, or it can be furnished molded into almost any special form, limited only by reasonable proportions. We have supplied Kennametal . . . as accurately molded inserts for the customer to apply and grind as desired . . . mounted on parts furnished to us, and then finished by the customer or by us . . . embodied in elements or devices produced complete in our plant.

You can readily, and economically, incorporate Kennametal in the wear-areas of the machines you use, and the products you manufacture. Tell us your problem. We will suggest how Kennametal can solve it.

KENNAMETAL
SUPERIOR CEMENTED CARBIDES
KENNAMETAL Inc., LATROBE, PA.

▲ Mention Item NED-5375 when writing ▲

For HIGH-SPEED PRODUCTION with SUPER-PRECISION

High speed spindle mounted on Fafnir Super-Precision Ball Bearings

FAFNIR Super-Precision Ball Bearings assure the finest precision work possible—at speeds which permit maximum production.

On shafts turning 40,000-60,000 r.p.m., deflection or "play" can be measured only in the millionths.

The skill and care in manufacture that make these ball bearings possible is reflected in the quality of all Fafnir Ball Bearings. The Fafnir Bearing Company, New Britain, Connecticut.

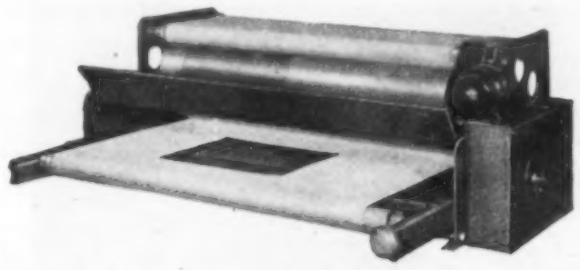
Buy War Bonds and Stamps

FAFNIR BALL BEARINGS

▲ Mention Item NED-5379 when writing ▲

PRINT DRYERS

Handling prints of 26 and 44-inch widths, B-8 table type continuous print dryers perform overall drying of blue prints or black and white prints. In addition to standard heat regulation, dryers are also equipped with variable speed drive motors and controllers. This permits instantaneous speed changes over range of 6 inches to 3½ feet per minute.

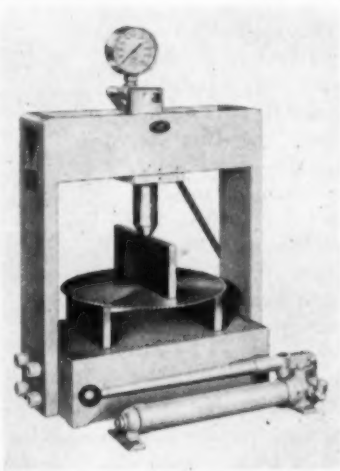


Current consumption is small: on 26-inch dryer, 14 amperes on 110 volts and 7 amperes on 220 volts; on 44-inch dryer, 23 amperes on 110 volts and 12 amperes on 220 volts. Features of construction are pressed steel framework, specially woven seamless band and heavy seamless copper revolving drum which can be chromium plated. Nichrome heaters, nickel contacts and asbestos insulated nickel wire are used. Both models are provided with receiving tray for dried prints. The 26-inch dryer is priced at $260; the 44-inch dryer at $375. (220-volt machine is $20.00 extra.) Made by **Peck & Harvey** 4327 Addison St., Chicago 41, Ill.

▲ Mention Item NED-5382 when writing ▲

LABORATORY PRESS

Having total capacity of 20 tons, this laboratory press has stroke of 5 inches. Table is 12 x 20 inches and is accurately machined. Power is derived from hydraulic hand pump. Press as illustrated does not show table or stand, however, these can be furnished to suit customer's requirements.



In addition to use as laboratory press, this unit can be used for many production straightening jobs such as large sprockets, gears and plates. Large sprocket is shown in place on machine. Weight of press is 400 pounds. Made by **Anderson Bros. Mfg. Co.**, 1901 Kishwaukee St., Rockford, Ill.

▲ Mention Item NED-5383 when writing ▲

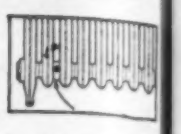
DO YOU KNOW?

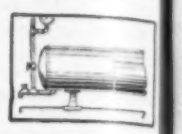
Microporous, wafer-thin rubber is replacing wood for separators in manufacture of storage batteries. Life of these rubber separators is claimed to be five times that of wooden types. Its use permits complete charging of battery at point of manufacture and shipment minus liquid. Battery is ready for immediate use with addition of acid and distilled water. Developed by United States Rubber Co., 1207 Rockefeller Center, New York, N. Y.

▲ Mention Item NED-5384 when writing ▲

THIS CAN...the key to quick, strong repairs

For stopping leaks and sealing cracks in apparatus and pipe lines, and for tightening studs, nuts, rivets, Smooth-On No. 1 Iron Repair Cement is a prime help to the maintenance man. First, because it's so easy to use . . . goes on like putty, requires no heat, does not necessitate dismantling of equipment. Second, because it makes lasting repairs . . . adheres securely and becomes stronger with age.





Get Smooth-On in 1-lb., 5-lb., 25-lb. or 100-lb. containers from your supply house—or direct from us if necessary.

FREE REPAIR HANDBOOK

40 pages of ingenious, practical repair instructions found nowhere else. 170 diagrams. Engineers, maintenance men—send for this helpful guide.

SMOOTH-ON MFG. CO., Dept. 10
570 Communipaw Ave., Jersey City 4, N. J.

Do it with SMOOTH-ON

▲ Mention Item NED-5386 when writing ▲

Exide's LIGHTGUARD

The most compact, complete, EMERGENCY LIGHTING UNIT

Despite all precautions of utility companies, events beyond their control may plunge war plants, arsenals, power stations and other vital areas into dangerous darkness. But where an Exide Lightguard is on the job, instant, automatic lighting protection is given.

Seven reasons why a Lightguard belongs in every plant:

1—No fixtures or wiring needed, except a cord and plug connection to A.C. supply.
2—Low price.
3—Lights an area of 7500 square feet.
4—Self-contained, automatic operation and charging.
5—Long-life, thick plate Exide Battery. Visible pilot balls.
6—Selenium trickle charger automatically maintains battery charge from ordinary A.C. supply.
7—Can be used as a portable light.

Additional details on this contribution to industrial safety, can be supplied upon application.

Exide EMERGENCY BATTERIES

THE ELECTRIC STORAGE BATTERY COMPANY, Phila., 32
Exide Batteries of Canada, Limited, Toronto

▲ Mention Item NED-5380 when writing ▲

▲ Mention Item NED-5387 when writing ▲

"SMOOTH FINISH" CUT SAVES TIME

Most cutting-off operations leave a jagged, uneven edge that requires finishing. This is not true of the Radiac method. Radiac Abrasive Cut-Off Machines and Cut-Off Discs cut so smooth, clean and true, that finishing is seldom required. Radiac machines cut cool, too, and that means no loss of temper. *Fast?* Radiac Machines and Discs can slice through 1½" round Tobin bronze in 2 4/5 seconds and it's the same for many other materials.

FREE FOLDER! Complete information on Radiac Abrasive Cut-Off Machines and Cut-Off Discs is available in the free 4-page illustrated folder, HOW TO CUT METAL LIKE CHEESE. Mail this coupon today!

*T. M. Reg. U. S. Pat. Off.
Copyright 1944. A. P. de Sanno & Son, Inc.

RADIAC ABRASIVE CUT-OFF MACHINES

A. P. DE SANNO & SON, INC.
Machine Sales Div., Dept. 50
106 S. 16th Street, Philadelphia 2, Pa.

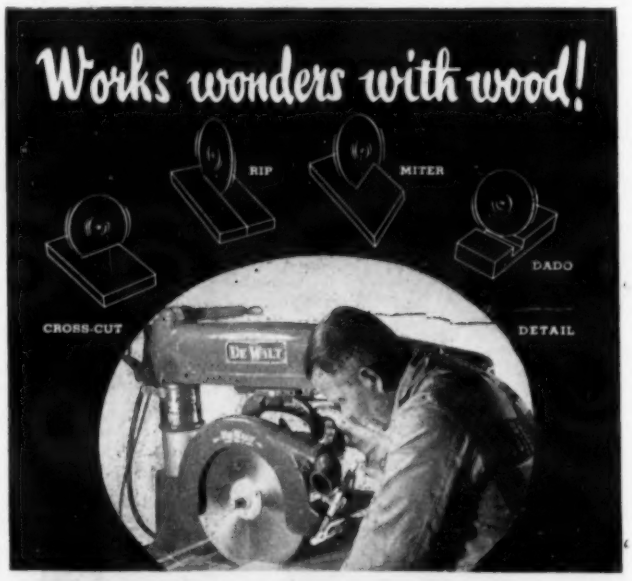
• Please send me the Free Radiac Folder, "How to Cut Metal Like Cheese":

Name_____
Title_____
Company_____
Address_____

THERE IS A RADIAC REPRESENTATIVE IN YOUR DISTRICT

▲ Mention Item NED-5381 when writing ▲

Works wonders with wood!



Here's the modern machine for all departments where wood is cut. For pattern work, crating and boxing, wood production department, or for all-around maintenance—DeWalt is ideal. DeWalt Radial Power Saws are available in power sizes from ½ h. p. to 10 h. p. Write for literature. Address DeWalt Products Corporation, 6402 Fountain Avenue, Lancaster, Penna.

DEWALT

▲ Mention Item NED-5385 when writing ▲

Plenty of PUNCH in this Hard-Faced punch

After this punch was given a protective overlay of Coast Metals Hard-Facing, it was able not only to turn out several thousand more track links before showing signs of wear, but also to do better and cleaner work. Material and labor costs involved in welding the overlay on the punch were more than compensated for by the much longer punch life obtained.

Users of a wide diversity of machines, equipment and products who have enlisted Coast Metals Hard-Facing for making the working surfaces of new or old parts wear-resistant are reporting equally outstanding economies.

Write for a copy of our new pamphlet "Your Best Protection Against Wear" which goes into full detail.

COAST METALS, INC.
Plant and General Offices: Canton, Ohio • *Executive Offices:* New York

COAST METALS *hard-facing weld rods*
MAKE YOUR EQUIPMENT LAST LONGER

▲ Mention Item NED-5388 when writing ▲

a.c.f.

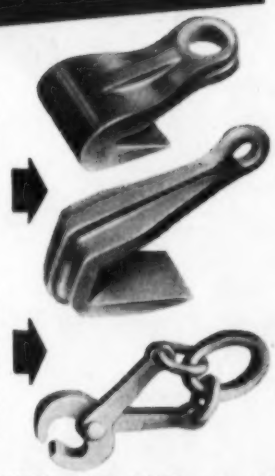
BERWICK ELECTRIC BAR HEATER

Heats a 1½" square bar, 30 feet long, to 2200° in 3 minutes! A ⅝" bar, 20 feet long, to 1900° in 30 seconds! Heats bars from ⅜" to 2" diameter, up to 30 feet in length, to any desired temperature from 200° to 2200°. Temperatures between 1100° and 2200° may be controlled by Electric Eye. Time of heating depends on size of Transformer purchased. Electrical consumption varies with the degree of heat required: 6-KWH per 100 pounds for 1200°; 10-KWH for 1900°; and 13-KWH for 2200°. Water-cooled electrodes furnished, with removable blocks for electrode ends. Side-clamping blocks may be had instead of butt-end blocks, with air cylinder pulling mechanism to keep work perfectly straight at high temperatures. Can be adapted to meet a variety of needs—write us your requirements.

AMERICAN CAR AND FOUNDRY COMPANY
30 Church Street, New York, N. Y.
CHICAGO DETROIT ST. LOUIS

▲ Mention Item NED-5389 when writing ▲

HOOKS THAT REALLY TAKE *Care* OF THE LOAD



HORIZONTAL PLATE HOOKS may be used in sets of either two or four. Will handle one or more plates at each lift. They are time and labor savers for fast loading or unloading when plates are to be stacked in the flat position.

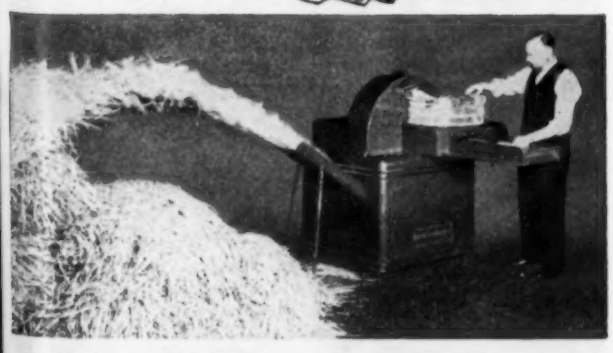
DOWNS RAIL TONGS built for safe and economical handling of railroad rails of all sizes and weights. Two-ton capacity with jaw openings of 3" for rails up to 100 lbs. ASCE. Three-ton capacity with jaw openings of 4½" for the heaviest rails.

SAFETY PLATE GRIPS with either rigid or loose guide loops will hold with a positive grip in all positions. Used for handling vertical plates, they are also safe for upending or turning over horizontal plates or assemblies. Write for illustrated catalog.

DOWNS CRANE & HOIST CO.
MECHANICAL ENGINEERS
540 W. Vernon Ave., Los Angeles 37, Calif.

▲ Mention Item NED-5390 when writing ▲

Don't BURN Paper CONVERT IT!



AIRFLUFF PAPER SHREDDER MAKES EXCELSIOR OUT OF CONFIDENTIAL PAPERS, BLUEPRINTS OR ANY WASTE PAPER

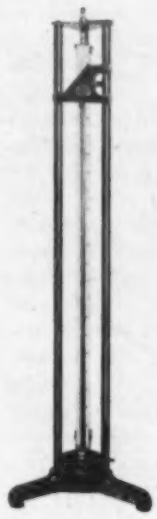
Here's the machine that destroys paper yet saves it! The AIRFLUFF Paper Excelsior Shredder, easily shreds, separates and fluffs old newspapers, confidential papers, blueprints, magazines, waste paper, corrugated cartons, tissue, Cellophane and waxed paper. Low price, simple to install. Power and maintenance cost less than 2c per 100-pound bale. Absolutely safe—present employees can easily operate. Cuts in widths from ⅛" to ⅜". Model No. 14 shreds 600 to 1800 lbs. per hour. Model No. 10 shreds 200 to 800 lbs. per hour. Write today for prices and complete facts about these remarkably simple, sturdy and efficient new AIR-FLUFF Paper Shredders.

WRITE TODAY

MITTS & MERRILL • SAGINAW, MICH.
1000 SOUTH WATER STREET
BUILDERS OF MACHINERY SINCE 1854

▲ Mention Item NED-5391 when writing ▲

PRECISION MANOMETER

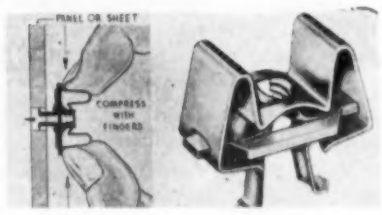


Equally useful as manometer, barometer, differential pressure indicator and differential vacuum indicator, this precision mercurial manometer is supplied with standard calibration of 0 to 800 millimeters of mercury. It can also be furnished with calibration in milibars, inches of mercury or altitude. Calibration of scale at factory to compensate for changes in relation between well level and column level makes usual indexing or adjustment for mercury meniscus in well unnecessary. Plugs and check prevent mercury spillage from well during normal handling.

Temperature compensation over any selected range of 30 degrees Cent. is obtained by setting graduated, knurled nut to ambient temperature. Indicator is thin, horizontal disc mounted on top of stainless steel float which rides on top of mercury column. Thin edge of disc gives hair-line indication. Built-in focusing magnifier which slides vertically on right-hand supporting column permits readings to nearest tenth of millimeter. Absolute mercury seal against air leaks or loss of vacuum is provided by stainless steel needle and ground glass seat when used as barometer. Made by **Wallace & Tierman Products, Inc.**, Belleville 9, N. J.

▲ Mention Item NED-5392 when writing ▲

CAGE TYPE FASTENER



Installed easily by compressing as shown in sketch and inserting into clearance hole, this floating cage type Speed Nut requires no riveting, welding or spinning operations, nor any special tools for installation. Legs spring apart when pressure is released to hold this self-locking fastener in screw receiving position for blind attachments. Nut will hold tight against force of inserting screw and screw-tightening torque. Floating Speed Nut within cage allows for any misalignment of clearance holes.

Although originally designed for front mounting of aircraft instruments, this Army Air Force approved fastener may be used for any type of blind attachment. It is available in style A6939 in brass and phosphor bronze for use with 6-32 machine screws and style A5939 in spring steel for use with standard 6Z sheet metal screws. Both styles are available to fit panel thickness from 0.062 inch and up. Made by **Tinnerman Products, Inc.**, 2044 Fulton Rd., Cleveland 13, O.

▲ Mention Item NED-5393 when writing ▲

DO YOU KNOW?

Evaporation processes in manufacture of penicillin are completed in 30 minutes through use of radio frequency concentration method recently developed. Previous method required 24 hours for completion. Savings of $65 in operating costs, reduction of maintenance, smoother flow of production and 90 per cent reduction in required floor space are additional advantages. Developed by Radio Corp. of America, RCA Bldg., 30 Rockefeller Plaza, New York, N. Y.

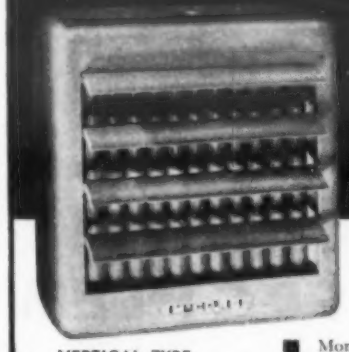
▲ Mention Item NED-5394 when writing ▲

SEE YOUR DEALER OR WRITE DIRECT

V & E MANUFACTURING CO.
PASADENA • CALIFORNIA

▲ Mention Item NED-5395 when writing ▲

Better Heat Distribution WITH McCORD Unit Heaters

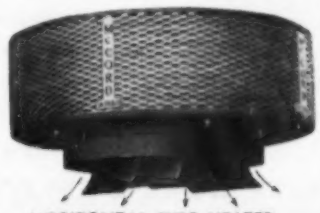


VERTICAL TYPE HEATER

More Heat . . . Better Distribution

■ More heat, better distribution is the answer to any heating problem. McCord, because there is a model and type to meet each particular condition, will do a better heating job. Every improvement that engineers and the experience of many users could suggest is incorporated in the improved models of McCord Unit Heaters. Due to the design and careful attention to balance a new degree of quietness has been attained. The scientifically designed spiral fin tube heating surface provides maximum heat transfer capacity.

McCORD RADIATOR & MFG. CO.
2580 E. Grand Blvd.
Detroit, Mich.



HORIZONTAL TYPE HEATER

Specify McCORD ON YOUR NEXT JOB

▲ Mention Item NED-5396 when writing ▲

ROUSTABOUT CRANE

The Free-Roving Tractor Footed

Rear view MC-4 Roustabout Crane.

Clear view of the load in any position.

For Fast, Efficient, Low-Cost Load Handling You Need the MC-4

It keeps things to 7½ tons moving around your plant, airport, railroad, dock. . . .

It's where you need it when you want it, tireless, easy to run, low in operating cost. . . .

It pays for itself quickly in saved time, manpower and expense. . .

Modernly engineered and built for years of overwork. . . .

Hundreds of users say they wouldn't be without their Roustabout Cranes, keep them in daily profitable use. . . .

It pays you to write for the whole story—Today, now.

THE HUGHES-KEENAN COMPANY
565 Newman Street • Mansfield, Ohio

ROUSTABOUT CRANE
Roustabout Cranes
By Hughes-Keenan
Load-Handling Specialists Since 1904

▲ Mention Item NED-5397 when writing ▲

POST-WAR PROBLEM

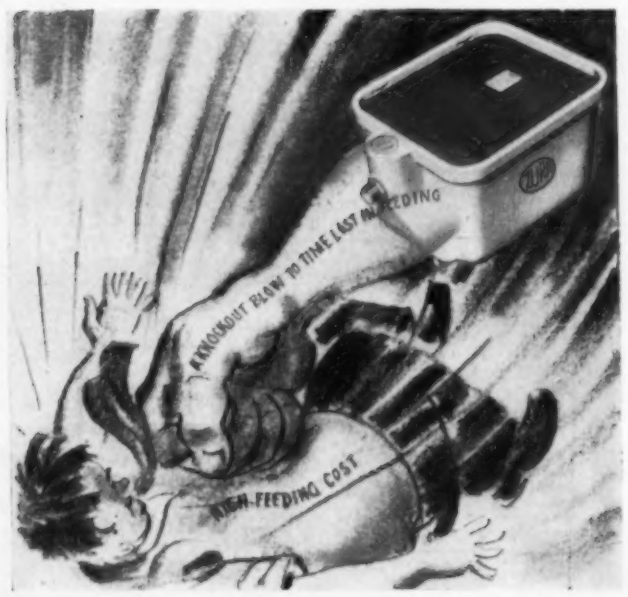
If you're in the blueprint stage now on your post-war products, you couldn't pick a better time to find out how Laminated Plastics by Taylor can help to improve your products. The engineers in our Post-War-Planning Department are doing wonders with Phenol Fibre and Vulcanized Fibre. Let's get together on your post-war problem. Take it to Taylor . . . now.

POST-WAR-PLANNING DEPARTMENT OF

TAYLOR FIBRE COMPANY

LAMINATED PLASTICS: PHENOL FIBRE • VULCANIZED FIBRE
Sheets, Rods, Tubes, and Fabricated Parts
Norristown, Pennsylvania • Offices in Principal Cities
Pacific Coast Headquarters: 544 S. San Pedro Street, Los Angeles

▲ Mention Item NED-5398 when writing ▲



Faster Feeding Cuts Costs...

Not just feeding costs, but production costs too! The primary purpose of an industrial cafeteria is to help reduce costs. Time saved by an industrial cafeteria can easily be lost through delay occasioned by nothing more complex than a grease clogged drainpipe! A close-to-fixture installation of the Zurn V.G.E. Greaseptor in the cafeteria kitchen prevents time losses. Greaseptors used in restaurants, hotels and other food serving establishments protect against grease clogging in drainage piping. The Greaseptor intercepts, separates and recovers the grease from waste water before it enters the level stretch of piping where grease collects and leads to particularly difficult, costly and time-wasting repairs. Greaseptors are easier to install, easier to clean, assure free flowing drainage at all times. They come in three convenient sizes suitable for any size kitchen: capacities, 25, 18 and 12 gallons per minute. A plumbing contractor or plumbing supply wholesaler can tell you about Greaseptors. Grease is a sneaky troublemaker. Don't give it a chance! Mail coupon immediately.

ZURN V·G·E GREASEPTOR

Zurn V.G.E. Greaseptors employ the efficient flotation principle for separating and recovering grease from waste water, are equipped with the exclusive new Flo-Trol which automatically controls rate of flow into intercepting chamber. Zurn Greaseptors are approved under War Department Specification for Theater of Operations (Modified) and Mobilization Construction Equipment, PE-620; also U. S. Army Corps of Engineers Tentative Specification PE-620, dated May 1944.

J. A. ZURN Mfg. Co., *Sales Office and Factory,* **ERIE, PA.**

CRANE CO. TRADE NAME

ZURN BUILDING • PLUMBING DRAINAGE PRODUCTS

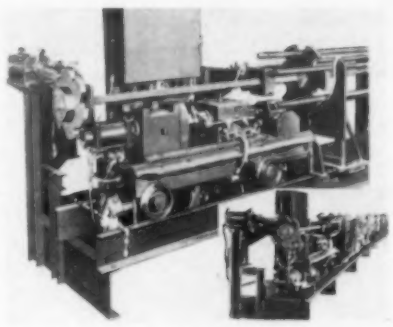
J. A. ZURN MFG. CO., Dept. NED, Erie, Pa.
We are interested in avoiding drain troubles. Please send folder giving complete information on Zurn Greaseptors.

*Name*_____
*Address*_____
*City*_____ *State*_____

Please attach to your business letterhead. FORM NO. 44-81

▲ Mention Item NED-5399 when writing ▲

COMBINATION PROFILER



Handling tubes up to 6 inches in outside diameter and lengths from 3 to 60 feet or longer, this combination automatic reaming and burring profiler can also be used for threading, flaring, turning, boring and chamfering pipe and tubing. Production of 200 to 400 tubes per hour can be obtained on end facing and burring operations and 100 to 200 tubes per hour where additional operation of inside reaming is required.

Head assemblies which consist of spindles and chucks are mounted on heavy cars suspended on flanged wheels which are anchored to channel iron track. One car can be moved to position for processing any length of tube desired. Tubes are fed to and from profiler by means of automatic reel feeding mechanism which selects tubes from storage rails regardless of diameter. Indexing mechanism, automatic self-centering type chucks and spindle advance are all actuated by hydraulic cylinders. Control panel houses relays, motor starters and other electrical accessories for automatic cycle operation. Made by **Pines Engineering Co.,** 600 Prairie, Aurora, Ill.

▲ Mention Item NED-5400 when writing ▲

AIR MOISTURE EXTRACTOR

Condensate in form of droplets, slugs or mist is automatically and continuously removed from compressed air or gas lines by Liquijectors which are adaptable to lines up to 1¼-inch pipe size and normal line pressures. Action takes place through two porous ceramic tubes; one inherently water repellant and the other water permeable but air impervious. Device is particularly practical in lines serving pneumatic tools, atmosphere gas generators, compressors, air-actuated control systems, spray and blast equipment and other pneumatic apparatus in which moisture may corrode equipment or damage work.

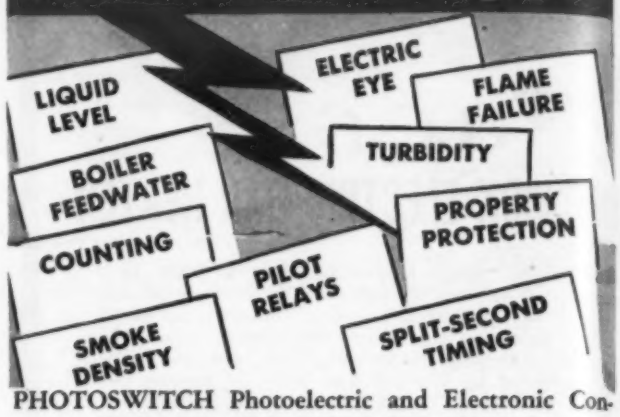
Compressed air or gas entering unit passes through water repellant tube where it is stripped of moisture. Droplets coalesce on surface of tube and drop to bottom of unit where they pass through second tube without loss of air to outlet. This second tube constitutes perfect air seal to rated limit of working pressure of unit. Rated pressure may be manipulated to users' specifications.

Illustrated model A-150-1 accommodates lines up to ⅜-inch pipe size with line pressures up to 100 pounds per square inch. Other units are available to handle demands of larger lines. Oval shape of unit permits installation flush against wall and directly in line without need for elbows or other fixtures. Made by **Selas Corp. of America,** D St. & Erie Ave., Philadelphia 34, Pa.

▲ Mention Item NED-5401 when writing ▲

▲ Mention Item NED-5402 when writing ▲

LATEST TYPES OF
Electronic Control
Information without Obligation



PHOTOSWITCH Photoelectric and Electronic Controls provide completely automatic operation . . . can be built into new equipment or easily installed in existing systems. Photoswitch Engineers are ready to study your automatic control problems. Write today.

PA-1

PHOTOSWITCH INCORPORATED

PHOTOELECTRIC & ELECTRONIC CONTROLS FOR EVERY INDUSTRIAL PURPOSE
CAMBRIDGE, MASS. • *Districts Offices* IN ALL PRINCIPAL CITIES

▲ Mention Item NED-5403 when writing ▲

SHOP STOOLS

RUGGED, DURABLE, BUILT TO LAST!

Model SW-36 Seat Height adjustable to 24, 26, 28 and 30 inches.

IMMEDIATE DELIVERY!

Check Your Requirements from these Popular Styles

★ Swivel Stools With Corrective Back Rests
★ Stationary Stools With Adjustable Back Rests
★ Cycle-Seat Stools
★ Stationary Stools With Inverted Back Rests

● Here's a sturdy, rugged, heavy duty stool designed to meet ALL factory requirements. It's adjustable to four heights . . . It's built to stand rough treatment and the large comfortable swivel seat enables workers to perform their jobs quickly and efficiently. The "corrective" back rest preserves needed energy for fatigue periods.

Send for catalog featuring the most complete line of industrial seating in the country. Years of experience in the furniture business enables us to build into stools the quality necessary to withstand hard usage.

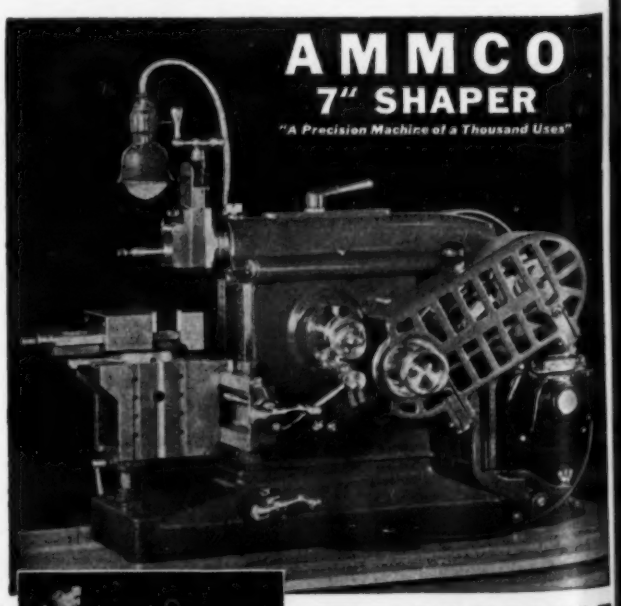
Jobbers & Salesmen! Territories Open. Write for details.

SPRINGFIELD FURNITURE WORKS
502 West Euclid Avenue • Springfield, Ohio

▲ Mention Item NED-5404 when writing ▲

AMMCO 7" SHAPER

"A Precision Machine of a Thousand Uses"



IT'S PORTABLE

--Saves Steps and Time--

Don't tie up a big shaper when so many jobs can be done just as accurately and much quicker and more economically on the AMMCO 7" PRECISION SHAPER.

Available for stationary installation or mounted on portable cabinet easily rolled to the mechanic's workbench ... Write today for specifications and prices.

AUTOMOTIVE MAINTENANCE MACHINERY CO.
2110 Commonwealth Avenue North Chicago, Ill.

▲ Mention Item NED-5405 when writing ▲

Machine Cutters also require perfect edges

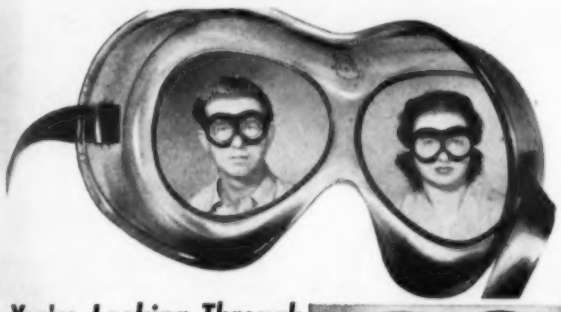
The edge on a machine cutter, as on a properly sharpened knife, must be an unbroken straight line; no saw teeth to break off, rub and generate heat.

For your final sharpening, hand stoning with India or Hard Arkansas Oilstones most nearly produces that "unbroken straight line."

Ask your Industrial Distributor salesman about the many ingenious shapes.

BEHR-MANNING
(DIVISION OF NORTON COMPANY)
TROY, N. Y.

▲ Mention Item NED-5406 when writing ▲



You're Looking Through the New CESCO *Cover-Lite* Goggles

Cover-Lite Goggle lenses are *replaceable*

As you're looking through these new CESCO *Cover-Lite* Safety Goggles you're practically experiencing their comfort—because when you actually have them on, you scarcely know they're there.

The combined weight of the lenses and the frame is only 96/100 of an ounce! The frame rests lightly—no pressure on the nose, brow or forehead. They're comfortably worn over prescription spectacles, too.

Notice the clear plastic, non-shattering, *replaceable* lenses. They have remarkable strength, and assure safety against impact. Also available with green lenses; and with either transparent green (No. 552) or white marbleized (No. 554) frames.

Write for complete information now.

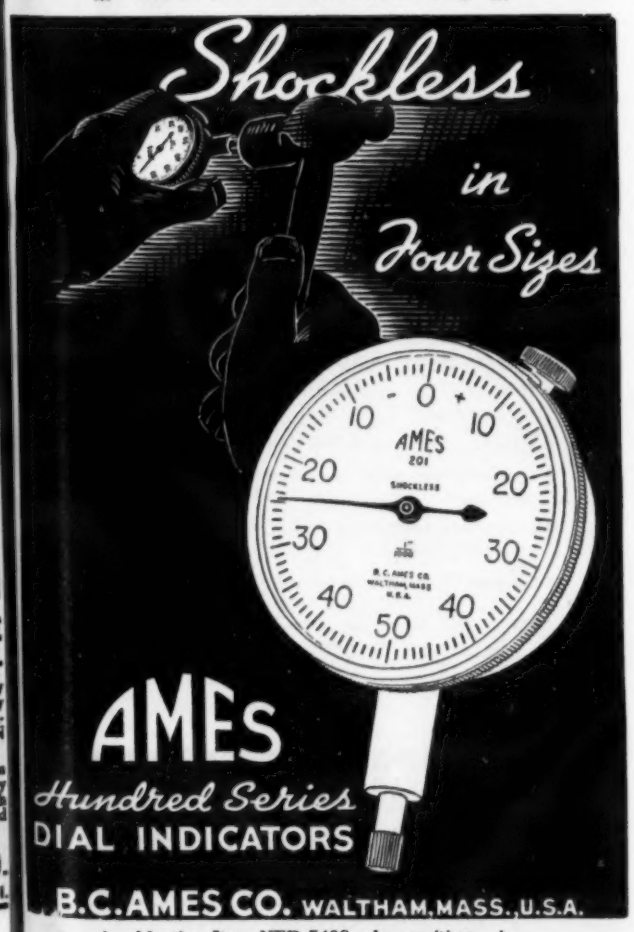
Before you buy safety equipment, see CESCO'S new 48-page catalog. Write for your copy today.

CESCO

CHICAGO EYE SHIELD CO.
2328 Warren Boulevard • Chicago 12, Illinois

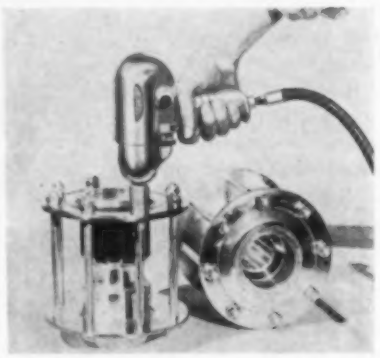
CESCO FOR SAFETY

▲ Mention Item NED-5407 when writing ▲



▲ Mention Item NED-5408 when writing ▲

IMPACT WRENCH

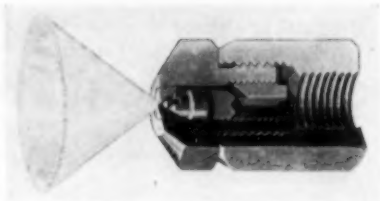


Operating with controlled torque, model 131 impact wrench has capacity up to ⅜-inch bolt size. This pneumatically powered tool prevents stretching or burning of threads and is capable of both forward and reverse rotation. It has calibrated adjusting screw on side of motor that enables operator to set any bolt or nut to any desired tension.

Motor is governor controlled, employing six bladed rotor mounted on precision ball bearings and is housed in aluminum case. Entire unit is only 6¾ inches overall in length and weighs 4¼ pounds. It is furnished complete with one socket, 8 feet of 5/16-inch hose and fittings. Made by **The Aro Equipment Corp.**, Erie St., Bryan, O.

▲ Mention Item NED-5409 when writing ▲

ATOMIZING NOZZLES



Made entirely of hard rubber, these atomizing nozzles are useful for chemical processes involving spraying of acids or other corrosive liquids. They produce hollow cone type of spray effecting uniform distribution of liquid being sprayed. Variety of sizes provides practical range of capacities and spray angles which permit exercising close control over spraying operation. Nozzle shown measures 1 inch in diameter and 1½ inches in length. Made by **Spraying Systems Co.**, 4029 W. Lake St., Chicago 24, Ill.

▲ Mention Item NED-5410 when writing ▲

SNAP GAGE SPINDLE

Developed for use with Precisionaire instruments, this snap gage spindle will not mar or scratch highly finished or soft plated parts. It can also be used on thin walled cylinders without any danger of collapsing them. Two other principal applications are for checking work while in machine and for checking parts of large size or unwieldy shape which could not be presented to gage.

Illustration shows C type snap being used to check shaft. Dimensional quality can be checked to fraction of 0.0001 inch. Spindle is made by **The Sheffield Corp.**, 1530 E. Third St., Dayton 1, O.

▲ Mention Item NED-5411 when writing ▲

COMMERCIAL TANK HEADS

Flanged and Dished
Flat Flanged—Dished Only
Flanged Only—Parabolic
Flanged and Semi Dished
Double Dished—Obround
Range Boiler Heads
Standard and A.S.M.E. Types
Diameters from 6" to 60"

"Commercial" Heads are formed cold in dies, and have "wrinkle free" flanges—smooth crowns—accurate dimensions.

We have two booklets on heads. Shape Book #5 & Price List.

Write—Free

The COMMERCIAL SHEARING AND STAMPING CO.
YOUNGSTOWN 1, OHIO

▲ Mention Item NED-5412 when writing ▲

FIND OUT... HOW

THESE BOOKS GIVE YOU THE FACTS

modine UNIT HEATERS

✓ protect manpower
✓ save fuel ✓ save space
✓ cost less to install and less to maintain

Get Modine Catalogs 144-A and 144

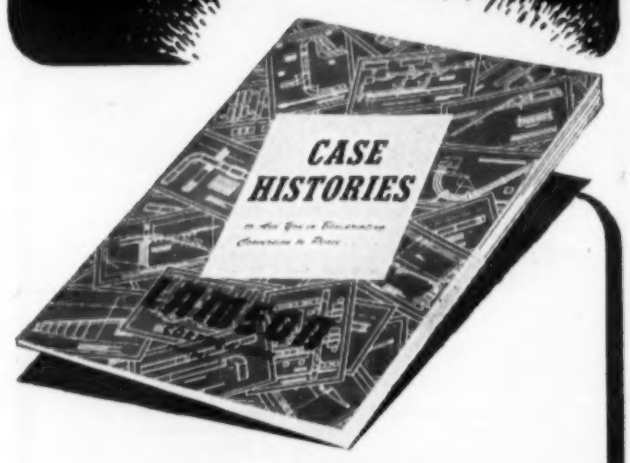
HOW YOU CAN GET modine UNIT HEATERS
On an order carrying a priority rating of AA-5 or better. Or, on a repair order—"MRO"—for instance.

ARMY E NAVY

MODINE MANUFACTURING COMPANY
1702 RACINE STREET • RACINE, WISCONSIN

▲ Mention Item NED-5413 when writing ▲

TO AID YOU IN BLUEPRINTING *Reconversion...*



A new booklet, offering concrete suggestions, prepared by Lamson engineers

● From their wide experience Lamson engineers have selected 17 actual cases posing difficult problems of conversion, analyze them for you, and present the solution and results in full detail. Something very similar to your present reconversion problem may be among them. It is offered in the hope that you will profit by the experience of others, and the experience of Lamson engineers. Learn how, through the expert use of conveyor systems, they have helped others achieve a steady, efficient production flow, with machine-scheduling, work-in-process and parts inventory coordinated to eliminate back-handling, unbalanced loads, assembly delays. Send today for a copy for yourself, and one for your production manager.

LAMSON
Conveyors and Tubes

LAMSON CORPORATION
550 Lamson St., Syracuse 1, N. Y.
Please send me ..... copies of "Case Histories to Aid You in Blueprinting Conversion to Peace."
Name..... Position.....
Company.....
Address.....
City..... State.....
Because of the paper shortage we can send these booklets only to those who give their company and position.

▲ Mention Item NED-5414 when writing ▲

HOW TO SAVE TIME
CLAMPING and RELEASING WORK

Here are a few Typical Cases—

Use of Knu-Vise enables you to start operations the instant the parts are placed in fixture. Flip of lever holds parts firmly in place with predetermined pressure. No time is wasted screwing down or releasing clamp.

BUY MORE WAR BONDS

KNU-VISE INCORPORATED
2212 Eighth St., Detroit 16, Mich.
4328 San Fernando Rd. Glendale, Calif.

▲ Mention Item NED-5418 when writing ▲

OSTER

"RAPIDUCTION" LATHE

Inability to make prompt deliveries on this popular SIMPLIFIED lathe does not prevent us from sending you complete information or accepting orders for future shipments. Write for illustrated catalog "LIST NO. 27-B".

THE OSTER MANUFACTURING COMPANY
2066 East 61st Street • Cleveland 3, Ohio, U. S. A.

▲ Mention Item NED-5419 when writing ▲

Contact **KAYDON** of Muskegon
For Unusually Large, High Precision Bearings

BALL and ROLLER BEARINGS
Standard and Special

From 6" Inside Diameter to 100" Outside Diameter
Commercial Finish or Ultra-Precision

Spherical Roller Bearings
Radial Ball Bearings • Thrust Ball Bearings
Radial Roller Bearings • Thrust Roller Bearings
Taper Roller Bearings

Straight or Self-aligning • Extra Heavy Duty or Special Light Type
Light Weight Non-Metallic Cages or Standard Bronze Type

★ *Early Delivery* ★

PRECISION MACHINE WORK OR GRINDING
to unusual accuracy in large diameters

Atmosphere Hardening • Flame Hardening • Precision Heat Treating
Metallurgical Laboratory • Microscopy and Physical Testing

For excellence in production of extremely precise, unusually large ball and roller bearings

THE KAYDON ENGINEERING CORP.
McCRACKEN STREET • MUSKEGON, MICH.
New in Name • • Old in Experience

▲ Mention Item NED-5420 when writing ▲

CIRCUIT BREAKER

Compact and light in weight, Klixon D-6751 circuit breaker for aircraft has "push-pull" feature which permits opening of breaker manually. Maintainance and repairs to circuit can be accomplished without deenergizing entire power system.

"Pull" to off position requires deliberate action and retains advantage of being safe against accidental tripping when operating adjacent switches. "Push-pull" button travels outwardly approximately ¼ inch upon tripping and exposes three colored band, part of which is luminous so that indication is given under all conditions. Shunting switch provides non-trip-free action.

Breaker will carry at least 120 per cent of rated current continuously and trip ultimately at 138 per cent of rated current in ambient temperature of 77 degrees Fahr. Unit meets usual requirements of shock, vibration and motion regardless of position of mounting. It is available in ratings from 5 through 50 amperes with standard AN mounting dimensions and is suitable for 30-volt direct current systems. Made by **Spencer Thermostat Co.**, Attleboro, Mass.

▲ Mention Item NED-5421 when writing ▲

PORTABLE CONVEYOR

Adaptable for loading, unloading, stacking, and elevating cartons, cases and bags, this portable, inclined, belt type conveyor is entirely self contained. Adjustable part of frame is fully counterbalanced. It can be adjusted either from floor or from top of pile. Absence of all supporting structures under adjustable boom makes it possible for this part of piler to project over pile or into car or truck without interference.

Conveyor is made in three sizes with high end of carrier adjustable up to 7½, 8½ and 9½ feet which provides for stacking commodities up to 12, 13 or 14 feet. It can handle individual commodities weighing up to 100 pounds or total uniformly distributed load of 25 pounds per foot. Power mechanism is mounted on base frame of machine. Cable is provided for plugging into any convenient electric power outlet. Made by **Standard Conveyor Co.**, 831 E. Seventh St., North St. Paul, Minn.

▲ Mention Item NED-5422 when writing ▲

DO YOU KNOW?

Teardrop enclosures formed by new method from single sheets of Lucite methyl methacrylate resin afford improved vision to pilots of P-51 Mustang fighter planes. Process is similar to blowing soap bubbles. Sheet is held at edges by ring which controls ultimate shape. Plastic is forced by air pressure to take shape of teardrop. Fabricated by Swedlow Aeroplastics Corp., 1521 Gardena Ave., Glendale, Calif.

▲ Mention Item NED-5423 when writing ▲

FILTER SCREENS
Look to CAMBRIDGE

This is one of the many standard designs in Cambridge Filter Screens. Available in all meshes, wire diameters, metals, shapes and sizes to fill every filtering need. Quotations and samples readily furnished. Send for FREE CATALOG.

THE CAMBRIDGE WIRE CLOTH CO.
CAMBRIDGE 13, MARYLAND

▲ Mention Item NED-5424 when writing ▲

Cut faster-better!
"Long-Life"
IDEAL Commutator SAWS *and milling* **CUTTERS**

"U" SLOT "V" SLOT-CHIP

Use Ideal "long life" Circular Saws and Milling Cutters for mica undercutting to insure faster—easier cutting service. Made by special process—outlast ordinary saws many times. Popular sizes in stock. Specials made to order.

PROMPT DELIVERY
Sales Offices in all Principal Cities
In Canada: Irving Smith Ltd., Montreal, Quebec

IDEAL *Sycamore*
★ IDEAL COMMUTATOR DRESSER CO ★
1032 PARK AVENUE • SYCAMORE, ILLINOIS

▲ Mention Item NED-5425 when writing ▲

Have You Seen It ?

This *new* postwar, general purpose, Fairbanks-Morse Motor is available to industry now.

Never before has there been more stamina—more protection—more versatility—built into a motor housing.

You'll have to see it demonstrated to fully appreciate how much this motor can really offer you.

Look at These Features!

- *Copperspun Rotor*—exclusive with Fairbanks-Morse; the only rotor centrifugally cast in *one* piece and of *copper*.
- *Protected Frame Construction*—excludes falling particles and dripping liquids.
- *Ball Bearings*—sealed-in and protected.
- *Conduit Box*—provides alternate assembly—gives new meaning to "adaptability" and "convenience."
- *Cross Flow Ventilation*—eliminates hot spots, assures uniform cooling.
- *General Purpose*—continuous duty, rated 40° C.

Write for detailed information. Fairbanks, Morse & Co., Fairbanks-Morse Building, Chicago 5, Illinois.

BUY WAR BONDS

FAIRBANKS-MORSE
DIESEL ENGINES, PUMPS, MOTORS, GENERATORS, WATER SYSTEMS, SCALES, STOKERS, FARM EQUIPMENT, RAILROAD EQUIPMENT
Motors

▲ Mention Item NED-5426 when writing ▲

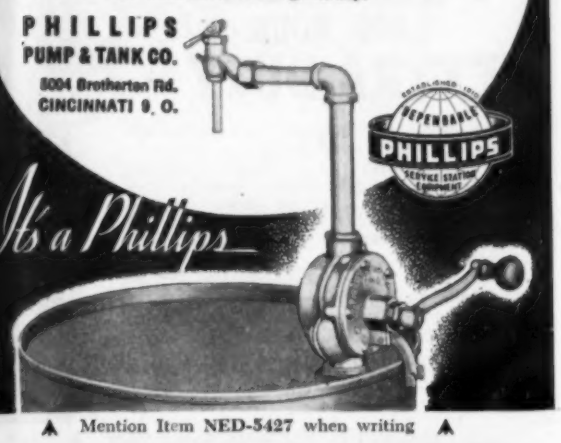
EVERYWHERE!

IN huge war production plants—as in one-man shops—EVERYWHERE that liquid petroleum products must be transferred from the original container—there's a need for *Phillips* Hand Operated Rotary Pumps.

Mechanically correct, Phillips Rotary Pumps are designed to do the job quickly and efficiently. Available with either gasoline hose or shut-off nozzle in 8 G.P.M. and 12 G.P.M. sizes.

For complete information on hand-operated pumps and self-contained tank units with rotary-quart and gallon stroke pumps for handling petroleum products, see your regular mill supplies distributor or write for new illustrated catalog—today.

PHILLIPS PUMP & TANK CO.
5004 Brotherton Rd.
CINCINNATI 9, O.



It's a Phillips

▲ Mention Item NED-5427 when writing ▲

CANNON D.C. SOLENOIDS

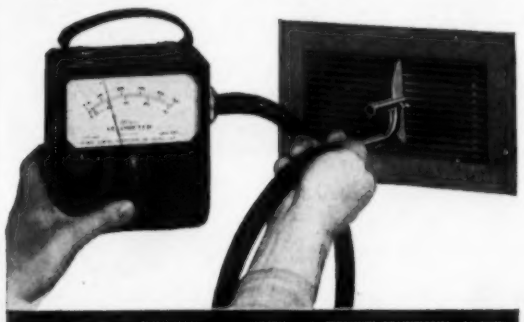
When your requirements demand D. C. Solenoids investigate Cannon Electric's Solenoids. Here, quality workmanship, superior engineering design meet high standards.

Cannon Solenoids are available in the following: (1) Three basic sizes: 1⅛", 1½" and 2¼" diameters. (2) 14 and 28 nominal (D.C.) Voltage. (3) Current range from 0.5 to 20-amp. (4) Strokes ranging up to ⅝". (5) Wide variety of mountings. (6) Types with standard Cannon end-bells.

Write for new Solenoid Bulletin. Address Dept. A-113, Cannon Electric Development Co., 3209 Humboldt St., Los Angeles 31, California.

CANNON ELECTRIC
Cannon Electric Development Co., Los Angeles 31, Calif.
Canadian Factory and Engineering Office:
Cannon Electric Company, Ltd., Toronto, Canada

▲ Mention Item NED-5428 when writing ▲



Alnor VELOMETER

the direct reading air velocity meter

Air speed in feet per minute is read directly and instantly on the scale of the Alnor Velometer. Anyone can use this simple instrument—there are no calculations, no leveling, no timing, and no conversion tables. This convenient instrument allows quick checking of draft, leaks, velocities at air conditioning outlets, and any other air movement. Quick, accurate air velocity measurements give a valuable check on efficiency of equipment.

The Velometer is made in several standard ranges from 20 fpm to 6000 fpm, and up to 3 inches total pressure. Special ranges available as low as 10 fpm and up to 25000 fpm velocity and 20 inches pressure. Write for bulletin with complete data.

ILLINOIS TESTING LABORATORIES, INC.
420 NORTH LA SALLE STREET
CHICAGO 10, ILLINOIS

▲ Mention Item NED-5429 when writing ▲

SAFETY JACKET

Black and white checkered design of this Ipco safety jacket offers high visibility to wearer either day or night. It may be used by helpers at open manholes, railroad crossing watchmen, switchmen, night patrolmen and others in hazardous locations where they must be seen.

Jacket is in form of vest and is large enough to fit over regular clothing. It has button front, buckle adjustment in back and one large pocket. Cloth is preshrunk canvas with woven color blocks. It launders satisfactorily and will not fade. Made by **Industrial Products Co.**, 2807 N. Fourth St., Philadelphia 33, Pa.

▲ Mention Item NED-5430 when writing ▲

SMALL CIRCUIT TESTER

Determining resistance of electrical circuit with scale reading directly in ohms, this pocket-type circuit tester is compact and light weight. It measures 4½ x 3 x 1½ inches with weight of 19 ounces. It is furnished in range from 0 to 10,000 ohms and can also be furnished as HTD-3 type with two ranges of 0 to 5000 and 0 to 50,000 ohms.

Tester consists of small high grade d'Arsonval type direct current voltmeter connected in series with standard flashlight battery. Terminals are provided for connecting to circuit under test. Removal of plate on front permits easy replacement of dry cell and also gives access to internal zero adjuster. Made by **Roller-Smith Co.**, 1766-A West Market St., Bethlehem, Pa.

▲ Mention Item NED-5431 when writing ▲

ELECTRONIC WELDER SWITCH

Instantly and completely discharging condenser bank through welding transformer, Trignitrol electronic switch is designed to supersede mechanical switching on capacitor welders. Instantaneous peaked discharge welds with minimum damage to metal grain structure with no burning of surrounding metal. Total capacitance required is substantially reduced.

Switch is self-contained and requires only four simple connections for immediate installation. Power supply is standard 110 or 220-volt, 60-cycle alternating current. Made by **Electronic Power Co.**, New York 18, N. Y.

▲ Mention Item NED-5432 when writing ▲

NEW METHOD FOR IDENTIFYING REPLACEMENT PARTS

Here's How Consolidated Does The Job

Consolidated Aircraft, like many other leading manufacturers, has found Kum-Kleen stickers ideal for the individual marking of replacement parts as specified by military regulations. They won't pull off like string tags, are far faster to apply, safer to use, more economical. Kum-Kleen stickers, available in various sizes and shapes, are mounted on a continuous tape which feeds through Addressograph, Elliott, and Ditto machines. They are applied *without moistening*—like magic, you simply press on. They stick to any smooth surface, won't pop off even under extreme heat, cold, or climatic conditions, yet easily peel off in one piece without scraping, tearing, or harming the surface.

Send today for samples of these labels now in use and learn how leading aircraft plants have solved this difficult identification problem! Write Dept. NED-9A.

AVERY
Kum-Kleen
PRODUCTION STICKERS

AVERY ADHESIVES:
451 East 3rd St., Los Angeles 13
New York, Boston, Detroit, Pittsburgh
Chicago, Kansas City, Mo. In Canada:
Enterprise Sales, Toronto.

▲ Mention Item NED-5433 when writing ▲

Important Addition TO SQUARE D AIRCRAFT CIRCUIT BREAKER LINE

CLASS 9310
PUSH BREAKER

RATED 5•10•15•20 25•35•50 AMPERES

● This new manual reset circuit breaker is designed to provide protection of low voltage direct current circuits (up to 30 volts D.C.) not requiring switching. Designed primarily for aircraft applications, it is suitable for boats, tanks, turrets and other mobile units.

The bi-metallic trip element affords time limit protection against small, momentary overloads or instantaneous protection on heavy overloads or direct short circuits.

INSTANT VISIBILITY DAY AND NIGHT
The manual reset button, black on top, has a red band to indicate trip in daylight and a luminescent band to show trip in darkness. Neither band is visible when the button is in normal closed position.

for your copy of the "*Airline*", address Regulator Division, 6060 Rivard Street, Detroit 11, Michigan

SQUARE D COMPANY
DETROIT • MILWAUKEE • LOS ANGELES

▲ Mention Item NED-5434 when writing ▲

Saves Man-hours, Spares Men

on many back-breaking pulling jobs

- moving cars
- warping barges
- pulling trucks
- dragging loads
- launching and beaching flying boats

LINK-BELT Electric CAR SPOTTER

● Jobs formerly requiring two or three men and considerable time are now handled easily, quickly, by one man and one L-B electric car spotter. With a few turns of rope around motor-driven capstan, man starts and stops load as needed. Reversing the turns, reverses direction of pull. No. 5 and No. 10 units, with 5 and 10 h.p. motors, integral or separate—for wire or manila rope pull of 5000 and 10,000 pounds at 45 ft. per minute. Write for Booklet 1992.

LINK-BELT COMPANY
2410 W. 18th St., Chicago 8, Ill.

▲ Mention Item NED-5435 when writing ▲

YOU CAN'T BEAT COMPETITION *TOMORROW* WITH DESIGN ALONE!

Hepplewhite won fame on design alone. Others could use equally good wood and cut just as good dowels and dovetails. But in today's competition you can and must back better design with superior materials tailored to the function of your products . . . Chemicals have been tailored into dozens of plastics and each like Formica laminated plastic into many grades with differing properties which make them exceptional for specialized use . . . The strength, machineability, dielectric properties, stability of dimensions, moisture and acid resistance of Formica have caused its wide application in industry. Now is the time to inquire about the interesting properties recent Formica research makes available for your post war products.

FORMICA

THE FORMICA INSULATION CO.
4625 SPRING GROVE AVE., CINCINNATI 32, OHIO

▲ Mention Item NED-5436 when writing ▲

IMMEDIATE SHIPMENT

STEEL BOXES

For Your Production Needs

Style 200
Straight Side Shop Box

A straight side shop box with drop handles each end. Excellent for shop use where stacking feature is not required.

No. 201 —6" x 9" x 3½"—20 Gauge—Each— $ .40
No. 202 —8" x 12" x 4" —20 Gauge—Each— $ .45
No. 203 —9" x 13½" x 4½"—19 Gauge—Each— $ .60

Style 600
Stacking Box

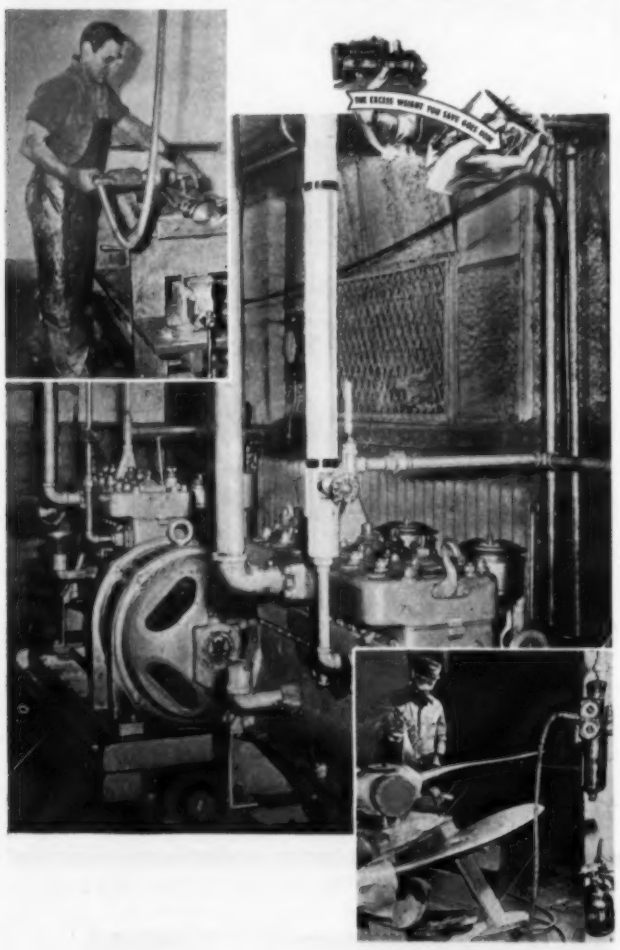
An ideal all-purpose shop box. Sturdy all-welded construction. Heavy skids act as positive stacking lock and re-inforce box at point of maximum wear.

No. 601 —10" x 16" x 6"—18 Gauge—Each— $ .95
No. 602 —12" x 18" x 8"—16 Gauge—Each— $ 1.25

Prices F.O.B. Factory, Phila.—Any Quantity!
Order Today—Write, Wire or Phone

AMERICAN METAL WORKS, Inc.
1503 GERMANTOWN AVENUE, PHILADELPHIA 22, PA.

▲ Mention Item NED-5437 when writing ▲



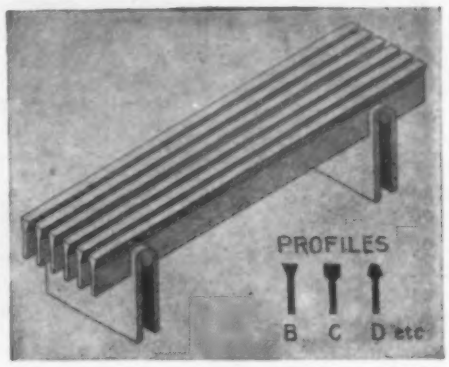
Here's An Air Compressor *for many uses*

This illustration shows a Schramm Air Compressor furnishing air for sanding and paint spraying airplane propellers.
Schramm stationary units fit the need for compressors that can do a variety of jobs in industrial and power plants.
Check these uses to which you can put Schramm in your plant: operating milling and drilling machines . . . chipping and calking hammers . . . cleaning engines and generators . . . sand blasting grooving bearings . . . cleaning boiler flues . . . and every other pneumatic tool requirement. Write today for latest bulletin.

SCHRAMM INC. THE COMPRESSOR PEOPLE WEST CHESTER PENNSYLVANIA

▲ Mention Item NED-5438 when writing ▲

SLOTTED SCREENS

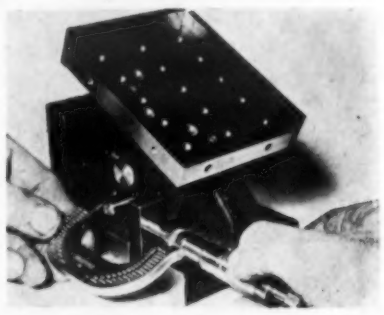


Recommended for difficult screening operations such as dewatering, recovery of fine materials from mine silts and sludges, centrifuging, pulverizing, municipal sanitation, industrial waste recovery and drying, Wedge Slot screen is composed of wedge-shaped profile bars held in position by U-shaped holders. This design provides accurately spaced, uninterrupted slots for wide range of processing and classifying operations. Assemblies, bar sizes and profiles can be furnished to fit both wet and dry screening requirements. Adequate screen rigidity is afforded by holding rivets which pass through profile bar and are held tightly inside curved top of U-support.

Fine openings are possible without sacrificing carrying strength. Screens can be furnished in curved form for such equipment as centrifugals, screw conveyors, pulpers and kilns. They can also be supplied for disc screen sections of any diameter. Slot openings are standard from 0.002 to 1 inch. Plain and abrasion resisting steels, stainless steel, copper bearing steel, bronze and brass alloys, aluminum and other metals can be used in construction of screens. They are fabricated to exact measurements required in any length or width. Various bar profiles are available for specific applications. Made by **Hendrick Mfg. Co.**, Carbondale, Pa.

▲ Mention Item NED-5439 when writing ▲

TOOLMAKER'S ACCESSORY



Useful for setting or measuring any angle from 0 to 90 degrees to accuracy within 1 minute or arc, Bemisine is multi-purpose toolroom accessory in that it has provision for holding small work pieces for grinding, machining and inspection operations. It requires only 2-inch capacity micrometer and reference to standard table of sines and cosines to determine and set any angle within its range in approximately a minute's time.

General construction is sturdy and simple, consisting of precision ground right angular base which supports accurate, drilled and tapped work holding table measuring 3½ x 4 inches. Work table is mounted pivotally so that it can be tilted to any angle up to 45 degrees. Angles in excess of 45 degrees are secured by merely resting this fixture on second side of its right angular base and computing complementary angle. Illustration shows 2-inch micrometer in position to measure over hardened measuring pin and block. Made by **Boston Tool & Die Co.** and distributed by **Nichols-Morris Corp.**, 50 Church St., New York 7, N. Y.

▲ Mention Item NED-5440 when writing ▲

BARBER-COLMAN

AUTOMATIC CONTROL SYSTEMS
SAVE FUEL

These bulletins describe three Barber-Colman Temperature Control Systems which will save fuel by preventing waste of heat through automatic maintenance of uniform temperature.

Fuel-Saving Starts With CONTROL

Barber-Colman equipment is engineered to provide efficient fuel-saving control in all types and sizes of buildings. Write for copies of these circulars today and join the vital fuel-saving program.

BARBER-COLMAN COMPANY
1206 ROCK ST. • ROCKFORD, ILL.

▲ Mention Item NED-5441 when writing ▲

Built to withstand shock or vibration

DURO TEST
2,000 HOUR
EXTRA DUTY

These rugged lamps reduce burnouts on extension cord service and installations subject to mechanical shock. The filament is firmly braced and sawtooth-mounted on shock absorbing spring steel arbor. Fully backed by Duro Test one year free replacement guarantee.

Complete line of industrial lamps sold in your area by our trained service representatives who help you solve your lighting problems.

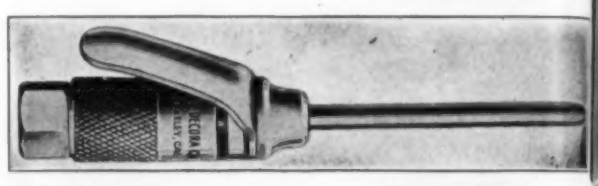
50*, 75, 100, 150, 200, 300 WATT SIZES

*Glass Arbor

DURO TEST CORP., NORTH BERGEN, N. J.
INCANDESCENT • FLUORESCENT • ELECTRONIC
SEND FOR CATALOG 44D

▲ Mention Item NED-5442 when writing ▲

DECORA
AIR DUSTER-BLOW GUN
A RITEX PRODUCT



Two orifice sizes, ⅛" or ¼"

$1.00

AS modern and efficient as the thousands of up-to-date American shops in which it serves! Indispensable for instantly cleaning machinery or removing moisture, grit, chips and filings. Its long, slender snout gets down into the cracks. Sure-grip, lever-type trigger gives graduated air volume control, also acts as hanging hook. Few parts, all quickly replaceable. Built for long wear in constant use. Prompt deliveries on War Production Board AA priorities. *(Distributorships open in several areas)*

See your DECORA Dealer or write

DECORA MANUFACTURING CO., Inc.
Factory Office: 1819 FIFTH STREET, BERKELEY 2, CALIFORNIA

Chicago Distributor:
W. I. Martin & Co., 711 S. Dearborn St.

▲ Mention Item NED-5443 when writing ▲

DISTRIBUTOR TERRITORIES OPEN — WRITE FOR DETAILS

▲ Mention Item NED-5444 when writing ▲

NON-ABRASIVE FLOOR CLEANER . . .

Fidelity Absorbo's sponge-like granules will not mar machinery.

Fidelity ABSORBO, a newly developed dry compound, removes oil and grease accumulations from floors of any type—wood, metal, concrete or linoleum. It absorbs up to 50% of its weight, quickly and easily. Composed of an inert, odorless material that is non-abrasive, it is harmless to skin, clothes, metal surfaces and flooring.

Fidelity ABSORBO can be sprinkled on floors subject to recurring oil or grease accumulations, and allowed to remain, or, where the condition is temporary, swept up after a few moments. In either case, the floor will be dry and footsure. Fidelity ABSORBO is approved by the Underwriters' Laboratories as a Class 1 non-combustible. Even when completely saturated with oil, it resists burning and prevents fire from spreading.

Trial 50 lb. bag $2.75 F.O.B. Newark, with unconditional money-back guarantee. Substantially reduced prices on quantity orders. (Territories open for distributors). Write: **FIDELITY CHEMICAL PRODUCTS CORP.**, Dept. B12, 430 Riverside Avenue, Newark, 4, N. J. **—Advt.**

▲ Mention Item NED-5445 when writing ▲

Specify Your Own Deflection Curves

for Rubber Mountings and Bearings

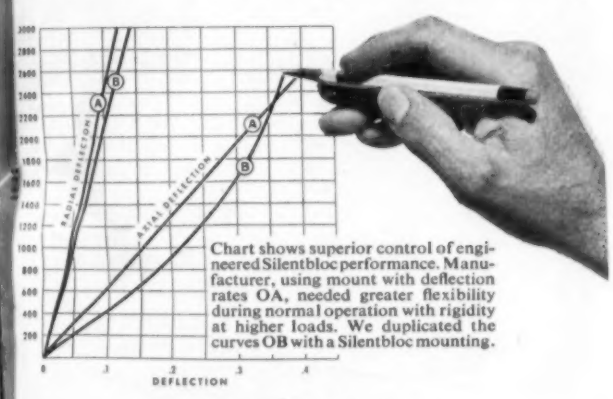


Chart shows superior control of engineered Silentbloc performance. Manufacturer, using mount with deflection rates OA, needed greater flexibility during normal operation with rigidity at higher loads. We duplicated the curves OB with a Silentbloc mounting.

We Can Engineer
THE GENERAL SILENTBLOC
To Conform Exactly To That Curve

YOU need not put up with "roughly good" results from vibration-damping materials. Designing with General Silentbloc mountings, bearings and couplings, you can specify the exact performance you want—*and get it.*

Patented Silentbloc construction permits almost infinite variation in performance characteristics. A rubber ring of predetermined size and modulus is inserted into a metal tube under high pressure. An inner sleeve or shaft is "shot" with extreme force through the axis of the rubber. Performance is determined by the variables—length and diameter of metal sleeves; type, modulus and elongation of rubber ring; distortion of inner and outer diameters of rubber; confinement of rubber by snubbing rings.

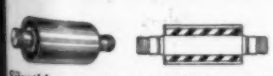
The permanent radial compressive force of the rubber forms an indestructible adhesion with the metal. The tensed rubber stays "alive," does not harden.

General designers can engineer Silentbloc fittings to conform to your specified rate of deflection for controlling, isolating or insulating against vibration or noise, absorbing shock loads. Silentbloc bearings are also used to give trouble-free torque action and to correct for misalignment of bearings and shaft supports.

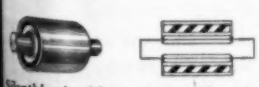
Silentbloc can be made of any metal, any type of rubber, in any size to carry loads of ounces to tons.

Silentbloc has been used in many fields—automotive, aviation, electrical, industrial machine, home and farm equipment. It can give your new products higher efficiency, longer life, less maintenance. Write for new booklet giving full information. The General Tire & Rubber Company, Dept. A-22, Wabash, Indiana.

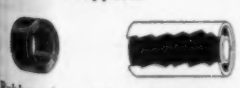
Shear-type Silentbloc rubber mounting for damping or isolating vibration. Indestructible rubber-to-metal bond.



Silentbloc to give controlled torque action. Trouble-free—no lubrication or service needed.



Silentbloc bushing to correct for misalignment in needle or ball bearings and in shaft supports.



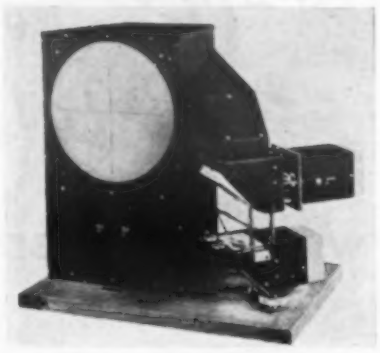
Rubber ring, left, is elongated and confined between concentric metal sleeves, right. Elongation and distortion give controlled performance.

The GENERAL SILENTBLOC
MOUNTINGS . . . BEARINGS
COUPLINGS

THE GENERAL TIRE & RUBBER CO.
Mechanical Goods Division, Wabash, Indiana

▲ Mention Item NED-5446 when writing ▲

OPTICAL COMPARATOR

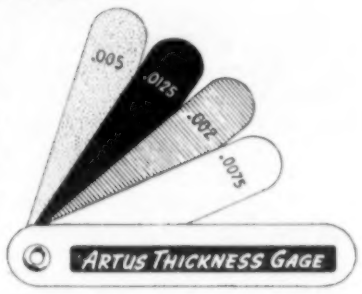


Fast, accurate inspection of small parts and assemblies is possible with Rex optical comparators which are available for either contour or surface inspections at magnifications from two times and up. By utilizing photographic principle, the positive shadow is compared with accurately projected negative shadow of same magnification. Glass master negative is produced by photographic process and it will not shrink or warp.

Background is restful green color. If piece is oversize at any point, that area will appear black. Any undersize portion will disclose white area. Positive shadow of piece being inspected is silver-pink or magenta. This shadow should fit exactly inside white area projected by negative lighting system. Absolute lines and use of color is claimed to increase inspection range of device with any magnification. Made by **Rex Laboratories**, 1717 Gent St., Indianapolis 2, Ind.

▲ Mention Item NED-5447 when writing ▲

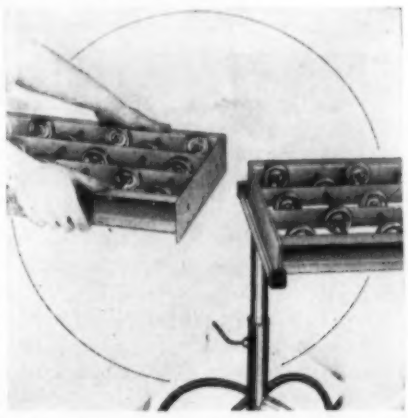
THICKNESS GAGE



Enabling user to ascertain quickly thickness by color, Artus multi-colored plastic thickness gage is size of pocket knife. Gage has eleven leaves with thickness ranging from 0.0015 to 0.030. Blades fold into and are protected by handle. Price is only $1.00. Made by **Industrial Products Suppliers,** 2 Broadway, New York 4, N. Y.

▲ Mention Item NED-5448 when writing ▲

PORTABLE CONVEYORS



Improvement incorporated in Roll-or-Wheel portable conveyors is coupling consisting of extended end plates which fit into slotted top of adjustable model Q stand. Single stand thus supports two sections while joining them together. Where stands are not required, style B coupling bars can be used. New construction of conveyor also features channel side rails and through axles mounting all wheels and two inner rails. Made by **The E. W. Buschman Co.,** 418 New St., Cincinnati 2, O.

▲ Mention Item NED-5449 when writing ▲

There is one method that thoroughly removes moisture, oil, dirt and scale from compressed air—*centrifugal force* as applied in the Aridifier.

Why experiment with air separators that clog, require periodical cleaning or replacement of elements, cause back pressure or effect only partial removal of contamination? Follow the lead of plants with outstanding war production records and install Aridifiers. You will assure yourself of clean, dry compressed air continuously. Write for bulletin.

LOGAN ENGINEERING CO.
4904 Lawrence Ave., Chicago 30, Ill.

Logan ARIDIFIER
Dries and Cleans Compressed Air

▲ Mention Item NED-5450 when writing ▲

For Cooling FLUIDS with More Accurate Control of Temperature

● Niagara Aero Heat Exchanger cools liquids or gases to within 10° of the atmospheric wet bulb temperature without refrigeration, with a saving of 95% of cooling water cost and saving the equipment cost of cooling tower, piping and pumping.

Niagara patented "Balanced Wet Bulb Control" holds fluid temperatures constant with properly controlled heating when needed to restore the minimum temperature.

NIAGARA AERO HEAT EXCHANGERS are successfully applied to liquid and gas chemicals and intermediates, many liquid products in process, baths of water, oils and solutions, hydraulic fluids, power equipment water-jackets, air and gas compressors, generators and condensers.

For complete information and performance records, address:

NIAGARA BLOWER COMPANY
25 Years of Service in Air Engineering
New York Address:
Dept. ED-94, 6 E. 45th St., New York 17, N. Y.
Field Engineering Offices in Principal Cities

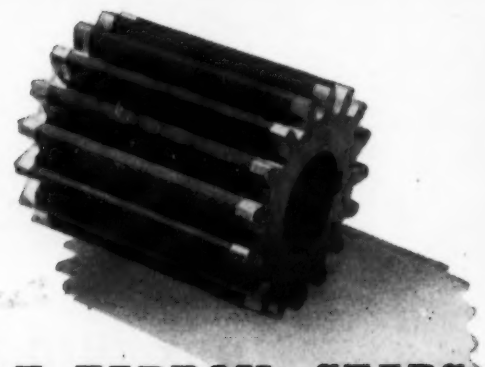
▲ Mention Item NED-5451 when writing ▲

Above prices are F. O. B. Factory. When shipment is made from nearest assembly plant, prices will be quoted F.O.B. that plant.

WHAT ABOUT POST-WAR?
Do your post-war products include sheet metal or aluminum? Check Lyon's manufacturing and designing facilities.

LYON METAL PRODUCTS, INCORPORATED
General Offices:
922 Madison Avenue, Aurora, Ill.
Branches and Distributors in All Principal Cities

▲ Mention Item NED-5452 when writing ▲



G-E FABROIL GEARS

The application of plastic materials to machines has done much to reduce objectionable noises which arise from gear trains. In clock mechanisms, automobile timing gears, variable speed transmission machine drives, and gear reductions of every description, nonmetallic Fabroil gears are introduced for their noise reducing qualities. Fabroil gears are 30 to 40 times as resilient as steel, permit tooth deflections which absorb vibrations, are strong, tough and long wearing. They operate at their best when alternated in a gear train with metal gears. For further information write Section L-244, One Plastics Ave., Pittsfield, Mass.

PL-244

PLASTICS DIVISIONS
GENERAL ELECTRIC

▲ Mention Item NED-5453 when writing ▲

CLECO PRODUCTION *Keeps Pace* with the Aircraft Industry's Demands!

☆ There are dozens of models and sizes of Cleco aircraft riveters, many styles with handles made of steel or aluminum. These tools strike accurately controlled blows, causing the rivet metal to flow uniformly without structural deterioration. Their use insures tight rivets, and avoids damage to the metal being riveted.

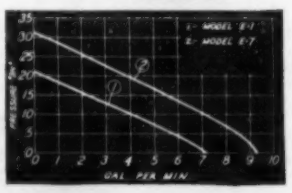
Write for Bulletin 85

THE CLEVELAND PNEUMATIC TOOL CO.
3781 East 77th Street ★ CLEVELAND 5, OHIO
BRANCH OFFICES IN ALL PRINCIPAL CITIES

▲ Mention Item NED-5457 when writing ▲

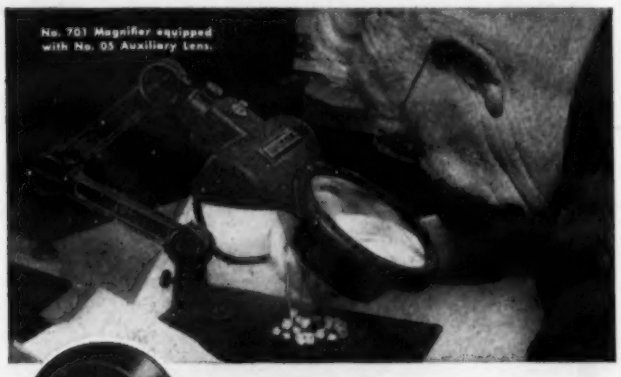
ANOTHER EASTERN SMALL PUMP WITH OUTSTANDING PERFORMANCE CHARACTERISTICS

These new pumps, designated as E-1 and E-7, were designed by Eastern to provide a still further range of choice to those who require small pumps to operate over long periods. Both are centrifugal pumps, powered by General Electric Universal Motors. Model E-1 is 7" x 3⅜" x 3 9/16", 1/15 H. P., weighs 6 lbs. and has a Maximum Pressure of 20 lbs. P. S. I. with a Maximum Capacity of 7 G. P. M. Model E-7 is 9" x 4" x 4", 1/5 H. P., weighs 8 lbs. and has a Maximum Pressure of 30 lbs. P. S. I. and a Maximum Capacity of 9 G. P. M. Performance curves for both models are shown on the performance chart illustrated here. Both of these models are designed for long life. They are equipped with stuffing boxes and mechanical rotary seals which completely seal the pumps against leakage. While the curves shown are those for which production is now standard, it is readily possible to obtain other characteristics where quantity is involved.



EASTERN ENGINEERING COMPANY
100 FOX STREET NEW HAVEN 6, CONN.

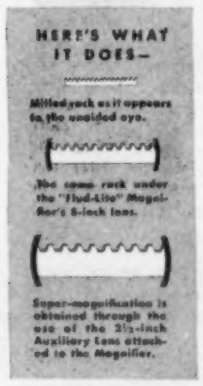
▲ Mention Item NED-5458 when writing ▲



LOOK INTO THIS!

Stanley "Flud-Lite" Magnifiers, Nos. 701 and 701H, widely used in industry, can be quickly doubled in power by attaching the Stanley Auxiliary Lens No. 05. Here's real aid where extra magnification is required for inspection or fine assembly.

The Auxiliary Lens, 2½ inches in diameter, is securely anchored in a cup-shaped attachment and can be easily attached to "Flud-Lite" Magnifiers No. 701 or 701H in a few seconds. Ask your distributor, or send for illustrated folder describing Stanley "Flud-Lite" Magnifiers and Auxiliary Lens No. 05. Stanley Electric Tool Division, The Stanley Works, New Britain, Connecticut.



STANLEY

▲ Mention Item NED-5459 when writing ▲

NEW Processes AND Materials

WELDING PROCESS

Aluminum, bronze, grey iron, malleable and steel castings are reclaimed readily with Mogul Nervous Weld process. Equipment may also be used for building up surfaces for press fits, repairing cracked housings and motor blocks, and preparing surfaces for metallizing.

Complete installation consists of pistol which requires 60 pounds per square inch air pressure at 4 to 5 cubic feet per minute and Nervous Weld machine which operates on 110, 220 or 440-volt, 25 or 60-cycle single phase alternating current. Pistol deposits atomized particle of metal welded to surface, leaving metal which is both welded and forged.

Aluminum, bronze or nickel rod is fed through pistol by trigger control at rates of ⅛ to ⅜ inch per stroke. Method eliminates stresses and distortion in repair of defective aluminum castings. Temperature never rises above 125 degrees Fahr., yet deposit is so dense at point of fusion that there is no apparent line of demarcation. It is claimed that even microphotographs will not show line of demarcation. Aluminum castings repaired with unit machine perfectly and withstand sodium hydroxide solutions used to prepare castings for alumilite plating.

Equipment incorporates power chamber and peening motor, air-cooled nozzle which keeps electrode and work cool, finger trigger for manual wire feed, needle valve to regulate air supply and electrode lug connector. Made by **Metallizing Co. of America**, 1330 W. Congress St., Chicago 7, Ill.

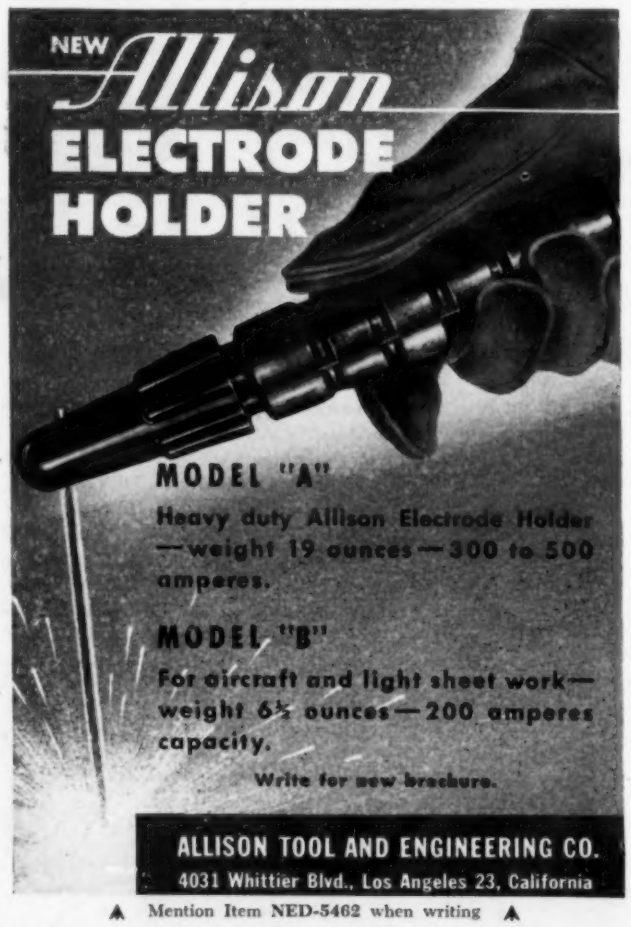
▲ Mention Item NED-5460 when writing ▲

PLASTIC DYE

Coloring of Vinylite plastic sheet stock by dipping method is quickly accomplished by use of Kriegr-O-Dip-V dye. This dye gives clear, transparent colors without use of expensive equipment or necessity of mixing it with other ingredients before use.

Plastic must be absolutely clean before being dipped into dye bath. Length of time which article must be immersed depends largely upon condition of plastic; 5 to 10 seconds for pastel shades, 20 to 30 seconds for medium shades and 30 to 60 seconds for heavy shades. Dye is available at present in four colors; yellow, orange, green D and rose. These colors are intermixable. New colors are being developed. Dye is available, F.O.B. Hollywood at $1.50 per pint, $2.00 per quart, $6.50 per gallon and $5.50 per gallon in five-gallon quantities of one color. Made by **Krieger Color & Chemical Co.**, 6531 Santa Monica Blvd., Hollywood 38, Calif.

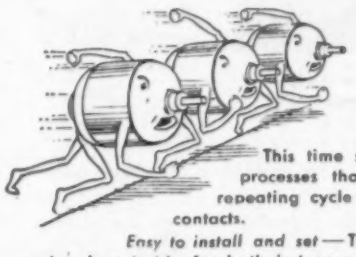
▲ Mention Item NED-5461 when writing ▲



▲ Mention Item NED-5462 when writing ▲

START and STOP *Automatically and On Time*... with G-E Time Switches

For pumps, fans, blowers, valves, signs, mixers



This time switch can be used on processes that require a continuous, repeating cycle of opening and closing contacts.

Easy to install and set—The simple, sturdy mechanism is suitable for both indoor and outdoor use. Can be mounted on conduit.

Inexpensive—Low first cost, and little or no maintenance, permit wide adaptability to repeating-cycle processes.

Accurate, dependable timing—because operated by the well-known Telechron motor.

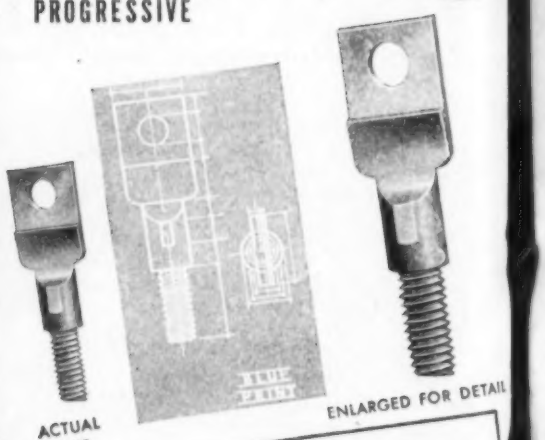
Also useful for the control of certain processes where it is desirable, or necessary, to allow large-size motors to slow down before power is applied to reverse the direction. For complete details write for Bulletin GEA 2963. *General Electric Company, Schenectady, N. Y.*

GENERAL ELECTRIC

▲ Mention Item NED-5463 when writing ▲

ANOTHER SPECIAL BY PROGRESSIVE

QUALITY PROMCO BRAND



71 other "specials" are illustrated in Catalog 18, which includes tables of weights per 1M standard pieces, dec. equivs. of fractions, etc. Write for it.

Special heads, threads, and finishes — on fastenings of any metal or alloy adapted to cold-upset — are Progressive's specialty. Weekly output: 25,000,000.

The PROGRESSIVE MFG. CO.
46 NORWOOD ST., TORRINGTON, CONN.

★ BUY MORE WAR BONDS

▲ Mention Item NED-5464 when writing ▲

"HANDI"... IS THE WORD FOR IT!

ALL-PURPOSE ELECTRIC HOIST

Here is the handy, easy to install, simple to operate electric hoist. They do all kinds of lifting jobs up to 500 lbs. They free workers from handling tiring loads, allowing them to work better. They save manpower, speed production, cut costs.

Low in price, P&H Handi-Lifts are available for three types of mountings—bolt, hook or trolley. Operate on 3-phase 60 cycle, 220 or 440 volts. They are sturdily built for years and years of service—yet are compact and lightweight. Use them anywhere—they're dust, weather and acid-proof. Have flexible chain lifting and safety limit stop for smooth, safe operation.

P&H also builds three other series of wire rope electric hoists — capacities up to 15 tons.

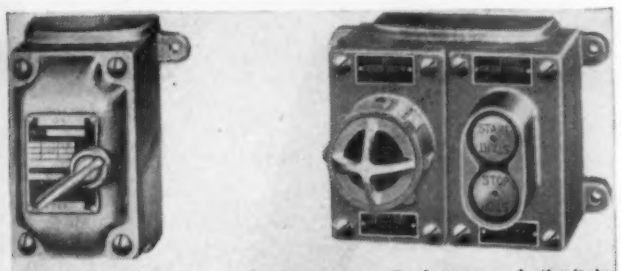
Send for new Bulletin H-23 today! It gives the complete story.

General Offices:
4537 W. National Ave., Milwaukee 14, Wis.

HARNISCHFEGER CORPORATION

▲ Mention Item NED-5465 when writing ▲

▲ Mention Item NED-5466 when writing ▲



Explosion-proof switch

Explosion-proof pilot light and push button station

Somewhere in your plant, there are several spots where a combination of explosion-proof, vapor-proof or dust-proof switches, signal lights and push-button stations would simplify your problems.

That is where standardized, precision-made, and interchangeable Russell & Stoll Company fixtures and fittings can serve you well.

Recent developments include some of the largest explosion-proof and power panels ever assembled.

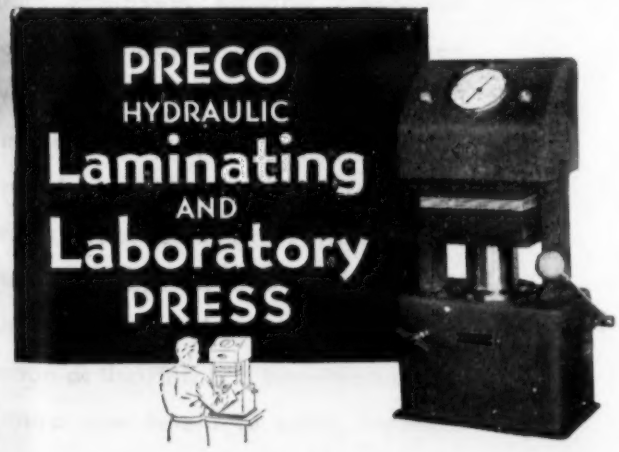
Since 1902

RUSSELL & STOLL COMPANY
EXPLOSION-PROOF WATER-TIGHT AND EVER-LOK RECEPTACLES, PLUGS, CONNECTORS, SWITCHES AND FIXTURES
125 BARCLAY STREET · NEW YORK 7, N. Y.

25

▲ Mention Item NED-5467 when writing ▲

PRECO HYDRAULIC Laminating AND Laboratory PRESS



Platens 8" x 8", for small scale laminating, or molding of plastics, wood, rubber . . . and for testing and research operations.

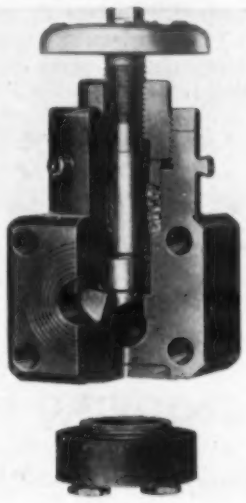
Only 27½" high, yet develops up to 40,000 lbs. platen pressure! Electric heating element and water cooling coil cast into each platen, and dual thermoswitches, assure fast heating and cooling with accurate, independent heat control. Two-stage pump, dual-stroke action, provides fast, easy platen closure. Self-levelling platens. Fool-proof . . . accurate . . . no pressure loss. Very versatile. Used for compression molding of synthetic rubber and plastics, laminating of wood, paper, plastics, powdered metallurgy, etc. Write today for free literature.

KINGSBACHER-MURPHY CO.
683 Santa Fe Ave., Los Angeles 21, Calif.

▲ Mention Item NED-5468 when writing ▲

New Processes & Materials

CHEMICALLY INERT VALVES



Constructed entirely of Karbate chemically inert materials, this globe type valve is resistant to practically all corrosive chemicals and is unaffected by extreme thermal shock. Available in 1 and 2-inch sizes, valves are tested to withstand 50 pounds per square inch pressure. They are small, lightweight and have short face-to-face dimensions. Because they are of graphite stock, they are self-lubricating and will not stick. Valves are equipped with adapter plugs for steam heating of those fluids which tend to crystallize or solidify when handled through unheated lines. Made by **National Carbon Co.**, P. O. Box 6087, Cleveland 1, O.

▲ Mention Item NED-5469 when writing ▲

BRIGHT ALLOY PLATING

Consisting of alloy of copper, tin and zinc, Bright Alloy plating was developed in laboratories of Westinghouse Electric & Mfg. Co. and has been used successfully as protective coating on many electrical products. Anodes are of same material as deposits, thus maintaining metal concentration of bath. Deposits come from solution bright and are blue-white in color. Plating solution is composed of common chemicals and contains addition agent having wetting properties. Special formulas are provided for still and barrel plating.

Alloy deposits are readily soldered with rosin as flux. Chromium can be applied directly over deposit after light anodic cleaning. Nickel, gold, silver, copper and many other metals can be plated over or under alloy deposit. Finish will withstand 200-hour salt spray test in thickness of 0.0002 inch. Distributed by **Hanson-Van Winkle-Munning Co.**, W. Church St., Matawan, N. J.

▲ Mention Item NED-5470 when writing ▲

FUNNELS & GRADUATES

Made of Lumarith plastic, these funnels and graduates are light in weight, transparent, nonshatterable and resistant to body and food acids. They are economically produced by injection molding process. Names and quantity markings are part of mold and will not rub or chip off at any time. Funnels retail from 10 to 69 cents depending on size and graduates range from 25 to 75 cents. Lumarith is product of Celanese Celluloid Corp. Funnels and graduates are molded by **B & W Molded Plastics**, 1346 E. Walnut St., Pasadena, Calif.

▲ Mention Item NED-5471 when writing ▲

▲ Mention Item NED-5472 when writing ▲

HOBART "One of the World's Largest Builders of Arc Welders."

Get the ARC WELDING with Simplified Control of all Vital Elements.

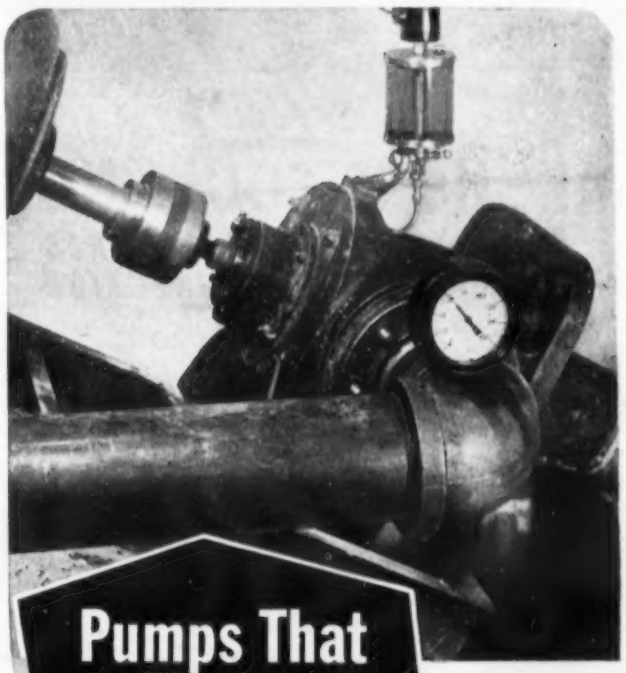
Good welds depend on fine adjustments—that's why Hobart with its 1,000 combinations of voltage and current, and its exclusive remote control is the choice of particular welders and production men everywhere. Hobart welders, gas or electric drive, are now available for important work. Ask us for delivery dates.

"Practical Design for Arc Welding" A design service, initial sheets FREE. Ask for them.

HOBART BROTHERS CO., Box ND-94 Troy, Ohio

HOBART "Simplified" ARC WELDERS

▲ Mention Item NED-5473 when writing ▲



Pumps That More Than Pay Their Way!

This unusual installation saved money for a large distillery. Illustration shows pump head of Fairbanks-Morse Turbine Type Pump and Motor, tied and mounted at a 38° angle on structural steel base.

★ Wherever you install them—whatever the service—Fairbanks-Morse Pumps more than pay their way.

They are a direct means of lowering operating costs—of enabling you to retire your old pumps that might be using as high as 25% more power than required.

Fairbanks-Morse Pumps are designed for sustained efficiency. They will stand up to any job. They have for many years.

Find out now if your pumps are slowing down production—stealing power and profits.

Let a Fairbanks-Morse pump engineer make an inspection. There is no obligation.

Write Fairbanks, Morse & Co., Fairbanks-Morse Building, Chicago 5, Illinois.

BUY WAR BONDS

FAIRBANKS-MORSE
DIESEL ENGINES · PUMPS · MOTORS · GENERATORS · WATER SYSTEMS · SCALES · STOKERS · FARM EQUIPMENT · RAILROAD EQUIPMENT
Pumps

▲ Mention Item NED-5474 when writing ▲

The Facts About

SUPERIOR

(THE BIG NAME IN SMALL TUBING)

SMALL METAL TUBING UP TO 5/8" OD

Superior facilities are devoted exclusively to the production of small metal tubing. Long before the war we set our maximum size at 5/8" OD because experience has shown that only by so doing could we maintain high quality in the smaller diameters. As a result, we have a mill operating at top speed which has been especially equipped to produce in a routine manner what formerly was known as "specialty" tubing. So, if you need cold drawn tubing in any metal, and the OD does not exceed 5/8"—then the inherent benefits of our specialization are yours for the using.

Specify SUPERIOR TUBING

SUPERIOR TUBE COMPANY
NORRISTOWN, PENNSYLVANIA

▲ Mention Item NED-5475 when writing ▲

SAFER!

Thor

AIR HOSE COUPLINGS

EXCLUSIVE DESIGN ASSURES POSITIVE-LOCK CONNECTION

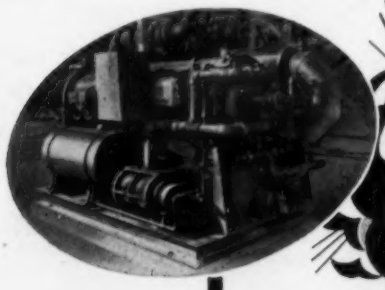
Every month more and more shops are turning to Thor "Perfect" Air hose Couplings as tests demonstrate their *greater safety.*

The ingenious, simple design of Thor Hose Couplings provides a positive, unbreakable connection . . . yet one that can be locked and unlocked in a jiffy. Thor "Perfect" Air Hose Couplings as tests demonstrate their *greater safety.*

Positively locked connection that won't break or come apart.
Greater safety — couplings cannot separate even if one lock becomes caught on something.
Truly universal — no right or left, male or female hose ends. Interchangeable in all sizes to 3/4".
Longer life — they're made of alloy steel, heat treated for extra durability; specially processed to prevent rusting.
Quicker operation — disconnect by a simple pull on sleeves; connect by a straight push and slight twist.

Thor Portable Pneumatic and Electric Tools
INDEPENDENT PNEUMATIC TOOL COMPANY
600 W. JACKSON BOULEVARD, CHICAGO 6, ILL.
Branches in Principal Cities

▲ Mention Item NED-5476 when writing ▲



Eliminate EXPLOSION HAZARDS

Volume of operation unaffected by variations in back pressure.

Low operating and maintenance expense.

Sturdy and simple construction.

Produces low cost inert gas.

Burns gas or oil.

In many manufacturing operations, air combining with vapors or dust from dryers, pulverizers, grinders, or mixers results in a combustible and highly explosive mixture. This dangerous condition can be prevented by the use of *inert gas* produced with a Roots-Connersville Inert Gas Generator. Easily applied to any type of manufacturing unit. Complete information in Bulletin 100-B14—write for it.

ROOTS-CONNERSVILLE BLOWER CORP.
409 Western Ave., Connersville, Ind.

Roots CONNERSVILLE SINCE 1854

Inert Gas GENERATORS

▲ Mention Item NED-5477 when writing ▲

New Processes & Materials

PRECOATED METAL STRIP

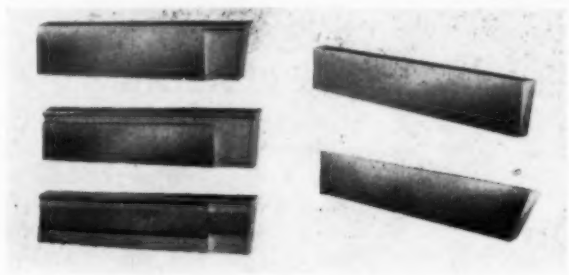
Metal strip in wide variety of gages and widths is coated to customers' specification in coil form for production of small stampings such as tags, buckles, ferrules, clips and bottle caps. Its use eliminates need for finishing after forming. Plastic coat is applied in any color to metal base in hard or soft finish and in varying thickness to suit application. Metal can be coated with one color on one face and alternate color on reverse side.

Steel, brass, aluminum and zinc have been coated by this process. Coating will withstand severe drawing and bending operations. Made by **Enameled Metal Strip Corp.**, 2000 Walnut St., Allentown, Pa.

▲ Mention Item NED-5478 when writing ▲

GROOVING & CUTOFF TOOLS

Grooving and cutoff tools of Stellite cobalt base alloy are finish ground and lapped to specified tolerances, latter being lapped only when specified by purchaser. Both types may be



obtained in either 98M2 or Star J-metal alloy.

Grooving tools are furnished in plain, channel and I-beam types for grooving operations on cast iron, aluminum, brass, bronze and steel. Side lands are lapped to provide maximum tool life. To resharpen, it is necessary only to grind cutting end, maintaining front clearance angle.

Two styles of cutoff tools are of double bevel type, tapered sides providing side cutting clearances. Style 2 has 6-degree angle incorporated in top to make it adaptable to certain holders. Both styles are suitable for cutoff operations on tubing, cylinders or hollow forgings of cast iron, brass, bronze, aluminum and some types of steel. Made by **Haynes Stellite Co.**, Kokomo, Ind.

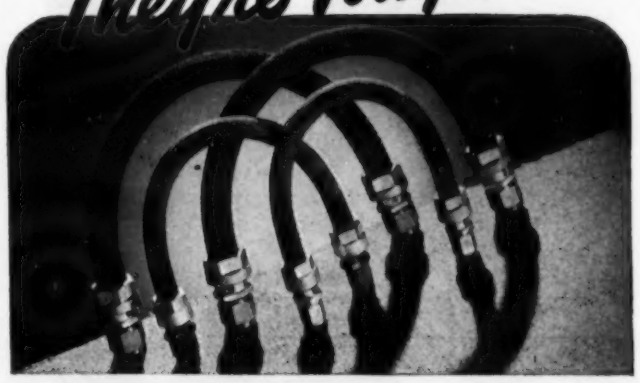
▲ Mention Item NED-5479 when writing ▲

BLOCK-OUT INK

Useful for obliterating any type of marking on wood or cartons so that they may be re-stenciled, sand colored Block-Out ink can be applied in same manner as in painting. It is heavy-bodied solution. In order that consistency of ink does not become too heavy, use of 1 quart of special thinner to 1 gallon of ink is recommended. Ink dries almost instantly. Brushes used with ink must be cleaned out with solvent such as gasoline, turpentine or similar solution when not in use. Otherwise, bristles of brush will harden. If space is needed for new address, Diagraph-Bradley regular black stencil ink will work satisfactorily in stenciling over Block-Out ink. Developed by **Diagraph-Bradley Stencil Machine Corp.**, 3749 Forest Park Blvd., St. Louis 8, Mo.

▲ Mention Item NED-5480 when writing ▲

They're Tough—



—because they have tough jobs to do!

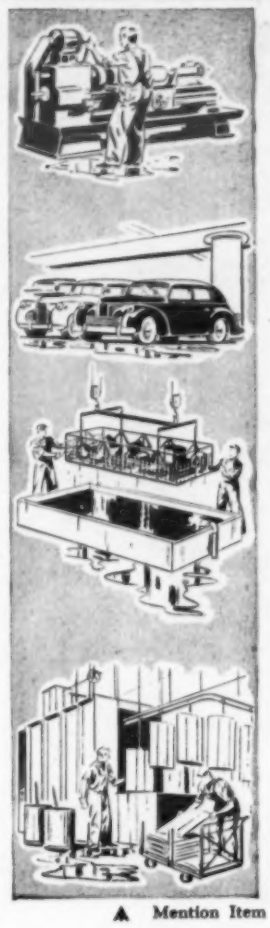
Weatherhead flexible hose and hose assemblies are available in various types for automotive and aviation installations as fuel, oil, hydraulic and vacuum lines. Designed to withstand excessive vibration and varying pressures, these hose assemblies are dependable in all weather conditions. They come equipped with quick attachable fittings, are entirely leakproof and easy to assemble. No special tools required. Write for complete information.

Manufacturers of vital parts for the automotive, aviation, refrigeration and other key industries

Weatherhead

THE WEATHERHEAD COMPANY, CLEVELAND 8, OHIO
Plants: Cleveland, Columbia City, Ind., Los Angeles, Canada—St. Thomas, Ontario

▲ Mention Item NED-5481 when writing ▲



Safety
ALL-WAYS
with

Carey ASBESTO-SORB

Absorbs Oil and Grease Keeps Floors Safe

In food processing plants, machine shops, garages, pickling plants and many other industrial operations, slippery floors are a constant hazard. Workers may fall; fires may destroy or damage plant and equipment; acids may injure clothing, tires and materials. CAREY ASBESTO-SORB eliminates these dangers by absorbing grease, oil, water, pickling solution battery and other drippage. Keeps floors dry and safe—provides secure footing under all conditions.

Write to Dept. 79 for details.

FIRE SAFE!

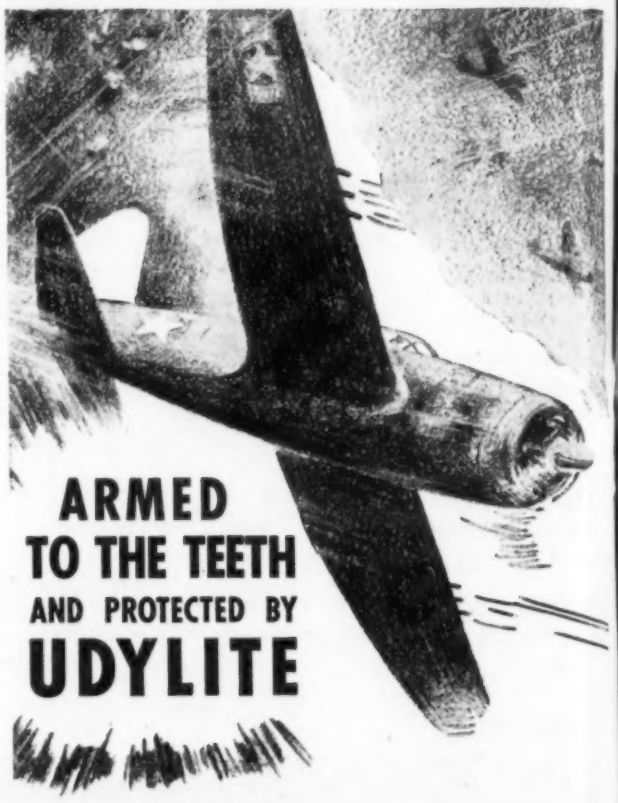
ASBESTOS-SORB is fire-safe . . . rated "Class 1, Non - Combustible" by Underwriters' Laboratories, Inc.

THE PHILIP CAREY MFG. COMPANY

Dependable Products Since 1873

OCKLAND, CINCINNATI . . OHIO

▲ Mention Item NED-5482 when writing ▲



ARMED TO THE TEETH AND PROTECTED BY UDYLITE

★ Like the "almost" invincible Achilles, America's fighting machines must have dependable, complete protection from attack. Attack not only from bombs and bullets but also from the relentless elements to which they are constantly subjected. ★ The name UDYLITE has never blazed as hero of this fight nor figured in the headlines of the day—yet it is difficult to name a single piece of metal war equipment or a single fighting machine which does not carry "protection by Udylite". Protection afforded by reliable Udylite equipment and our many perfected processes. In jobs that must not fail they choose UDYLITE.

THE UDYLITE CORPORATION
1651 E. Grand Blvd., Detroit 11, Mich.
Chicago 12, 1943 Walnut Street — Long Island City 1, N. Y., 11-16 44th Drive — Cleveland 3, 4408 Carnegie Ave.

▲ Mention Item NED-5483 when writing ▲

Improve Work . . . Save Time with BENJAMIN

Service-Lites

The Portable, Telescoping Work Lights!

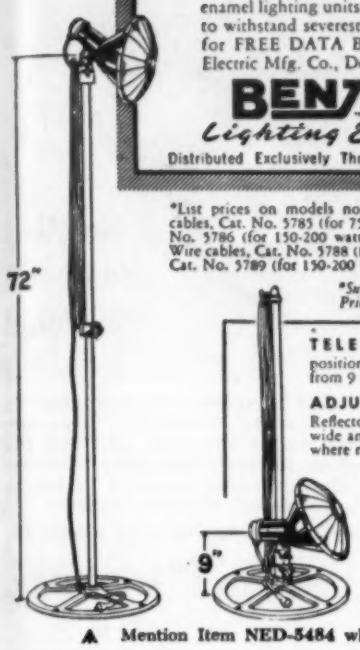
Handy, quickly adjusted Service-Lites are the answer to the problem of providing improved illumination for many industrial operations. These inexpensive porcelain enamel lighting units are durably constructed to withstand severest industrial usage. Write for FREE DATA BULLETIN. Benjamin Electric Mfg. Co., Dept. W, Des Plaines, Ill.

BENJAMIN Lighting Equipment

Distributed Exclusively Through Electrical Wholesalers

*List prices on models now available: With Two-Wire cables, Cat. No. 5785 (for 75-100 watt lamps) $16.00; Cat. No. 5786 (for 150-200 watt lamps) $20.75. With Three-Wire cables, Cat. No. 5788 (for 75-100 watt lamps) $16.75; Cat. No. 5789 (for 150-200 watt lamps) $21.50.

*Subject to applicable trade discounts. Prices for complete units less lamps.



TELESCOPING SHAFT positions light to any desired height from 9 to 72 inches above floor.

ADJUSTABLE REFLECTOR Reflector tilts up or down over a wide angle to direct light precisely where needed.

HEAT RESISTING COVER GLASS PROTECTED BY WIRE GUARD

LISTED BY UNDERWRITERS' LABORATORIES AS VAPOR-PROOF

▲ Mention Item NED-5484 when writing ▲

Impossible requests from the drafting room?

A transparent foil — A blue-line print — A dry-photo print — A black-line print — A red-line print — A black-line intermediate — A black-line cloth — A two-tone photo print

IMPOSSIBLE when you rely entirely upon blueprint or semi-moist machines. Impossible because "wet" development gives you no choice.

POSSIBLE when you have an Ozalid Whiteprint machine (which prints and dry-develops) or an Ozalid Dry-developer which you can use with your present printer.

POSSIBLE because Ozalid eliminates chemical baths and driers . . . and allows the use of a really amazing variety of sensitized materials which react ONLY to the unique "dry" process.

SEE these prints yourself. Learn how quickly you can produce them, how you can save by using them in ALL departments.

WRITE for free booklet of Ozalid Whiteprints and catalog, TODAY.

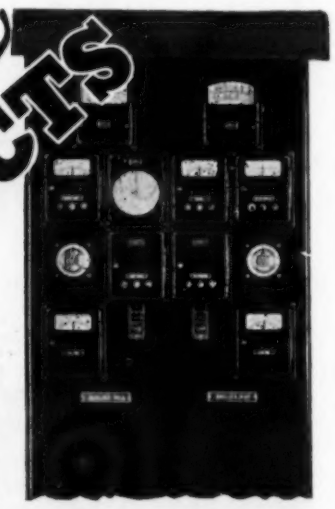
OZALID PRODUCTS DIVISION

General Aniline & Film Corporation • Johnson City, N. Y., U. S. A.

OZALID IN CANADA—HUGHES-OWENS CO., LTD., MONTREAL

▲ Mention Item NED-5485 when writing ▲

SEES TELLS CONTROLS FACTS



You get far more from Hays Automatic Combustion Control than just an accurate statement of facts. You get a Control System which automatically makes certain *that the facts are what you want them to be.*

Your boiler room may show similar vital savings. Ask Hays to make a survey and recommendation—there's no obligation and it's usually worth while in savings. The new Combustion Control Catalog is full of valuable data, write for it.

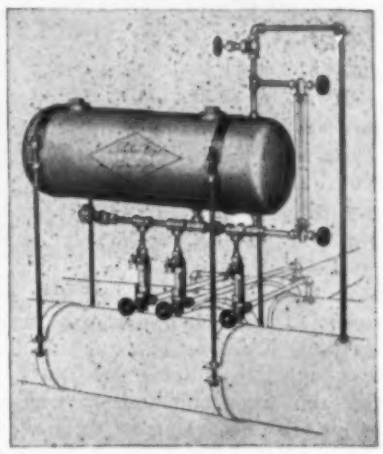
The HAYS CORPORATION

COMBUSTION INSTRUMENTS AND CONTROL — MICHIGAN CITY, INDIANA, U.S.A.

▲ Mention Item NED-5486 when writing ▲

New Processes & Materials

BOILER WATER TREATMENT



Consisting of 10-gallon tank having one or more drip valves for connection to steam headers, Suhm-Mac Steam Way Economizer feeds accurately controlled amounts of alkalizing liquid into steam lines. This reduces acidity and eliminates corrosion, sludge and scale in lines and equipment served by lines. It is designed to operate on pressures up to 250 pounds per square inch. Each valve is equipped with glass vial and adjustable vernier control for proper proportioning of treatment into lines. Made by Suhm Co., 1942-M S. Kinnickinnic Ave., Milwaukee 4, Wis.

▲ Mention Item NED-5487 when writing ▲

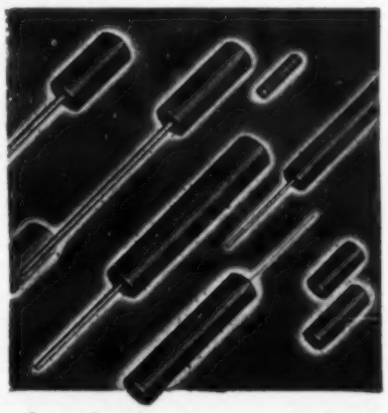
SYNTHETIC RUBBER ADHESIVES

Two synthetic rubber cements have been developed for wide range of industrial and commercial applications. General utility type will adhere to almost any clean surface and is effective replacement for natural rubber cements. Synthetic adhesives are available for heat vulcanization, air curing or cold adhesions. Compounded cements are suitable for fabric, leather and synthetic adhesions, to themselves or to each other. These adhesives have non-toxic solvents and give same bond when used with cured or uncured Neoprene as rubber cements give with natural rubber.

For metal adhesion, two series 300 Plastilock cements are available. First is used to bond vulcanized Neoprene to porcelain, metal or similar materials. Second is used with uncured Neoprene for same purpose. Made by The B. F. Goodrich Co., Dept. E, 500 S. Main St., Akron, O.

▲ Mention Item NED-5488 when writing ▲

SIDE MOLDED IRON CORES



Claimed to have outstanding advantages for permeability tuning applications at broadcast band frequencies, this line of iron cores is molded by means of pressure applied at sides rather than from ends. Similiar cores are available for short wave frequencies including television and frequency modulation. Density from molding pressure extends uniformly throughout length of cores. Made by Stackpole Carbon Co., St. Marys, Pa.

▲ Mention Item NED-5489 when writing ▲

CHIKSAN FORMULA FOR A *Perfect* SWIVEL JOINT

$$BB_2 + EP = \frac{LT}{P/V}$$

BB_2 = Double rows of Ball Bearings — For easy turning with minimum friction. They also maintain perfect alignment of moving parts.

EP = Effective Pack-Off — This self-adjusting unit permits the use of the same Swivel Joint for all services. Nothing to tighten or adjust.

LT = Low Torque — No excessive friction drag because turning takes place on ball bearings which hold moving members together. Tightness of Joint does not depend upon compressing packing element by means of bolted flanges, thereby causing joint to stick.

P/V = Pressure or Vacuum — Pre-determined pressure on Packing Ring prevents leaks due to pressure or vacuum. Packing automatically adjusts itself to either service.

These are the essential elements for perfect swivel action. You get ALL of them when you specify Chiksan Ball-Bearing Swivel Joints.

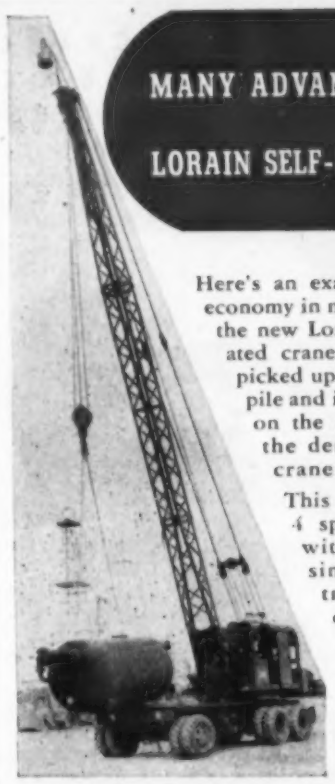
WRITE FOR CATALOG AND ENGINEERING DATA

CHIKSAN TOOL COMPANY

Ball Bearing SWIVEL JOINTS for ALL PURPOSES

BREA, CALIFORNIA

▲ Mention Item NED-5490 when writing ▲



MANY ADVANTAGES OFFERED by LORAIN SELF-PROPELLED CRANE

Here's an example of the mobility and economy in material handling offered by the new Lorain 20-ton one-man operated crane. In this operation, it has picked up the boiler from the storage pile and is transporting it, supported on the crane loading platform, to the desired location where the crane will set it into place.

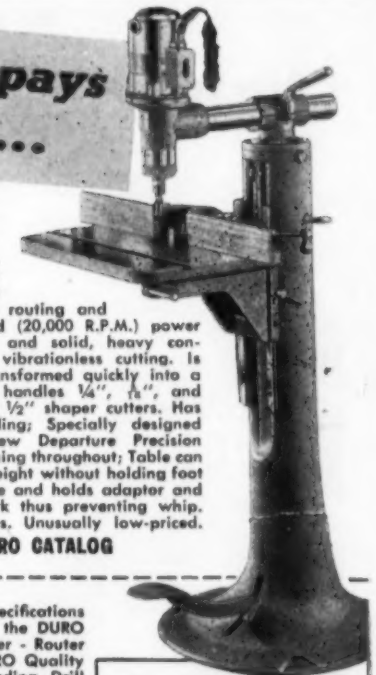
This new type crane travels at 4 speeds on 12 rubber tires, with power supplied by a single turntable engine; all travel, steering and crane operations controlled from the crane operator's position. For complete details, write—

THE THEW SHOVEL CO.
Lorain, Ohio

The Thew Shovel Company
LORAIN, OHIO

▲ Mention Item NED-5491 when writing ▲

Quickly pays for itself . . .



A NEW LOW COST DURO QUALITY SHAPER-CARVER-ROUTER

Is ideal for routing non-ferrous metals and many other operations. Can be set up for time-saving duplicate routing and veining. Combines high speed (20,000 R.P.M.) power (1200 watts at the spindle) and solid, heavy construction that gives smooth, vibrationless cutting. Is extremely flexible—can be transformed quickly into a Shaper. Standard equipment handles 1/4", 1/8", and 3/8" bits for routing—1/16" and 1/2" shaper cutters. Has many special features including; Specially designed G. E. Universal Motors, New Departure Precision ball bearings, precision machining throughout; Table can be instantly adjusted to any height without holding foot pedal. Chuck is part of spindle and holds adaptor and cutter extremely close to work thus preventing whip. Many other exclusive features. Unusually low-priced.

SEND FOR DURO CATALOG

Giving full specifications and prices on the DURO Shaper - Carver - Router and other DURO Quality Machines including Drill Presses, Circular Saws, Band Saws, Etc.

Duro Metal Products Company
2672 N. Kildare Ave.,
Chicago, Ill.
Gentlemen: Send me FREE copy of latest DURO Catalog.
Name .....
Address .....

DURO TOOLS
MACHINE TOOL DIVISION

ALSO MAKERS OF DURO HAND TOOLS

▲ Mention Item NED-5492 when writing ▲

for ACCURATE, DEPENDABLE INSTRUMENT CONTROL

OHMITE RHEOSTATS AND RESISTORS

From experience—engineers have come to know and depend on Ohmite Wire-Wound Rheostats and Resistors for fixed, or variable control of current and voltage in operating or test instruments. Used in the most advanced electronic and electrical devices. Widest range of types and sizes.

Write on company letterhead for Industrial Catalog and Engineering Manual No. 40.

OHMITE MANUFACTURING COMPANY
4843 WEST FLOURNOY STREET, CHICAGO 44, ILLINOIS

Be Right with **OHMITE**
RHEOSTATS • RESISTORS • TAP SWITCHES

▲ Mention Item NED-5493 when writing ▲

JOHNSON METAL CUT-OFF BANDSAW

Metal sawing is a more efficient operation with the Johnson Saw. Designed for quick set-up; adaptable to practically every kind of cutting job. 3-point base for anchorage on uneven flooring.

Write today for descriptive folder to Sales Offices

JOHNSON MANUFACTURING CORP.
8004 CHRYSLER BLDG., NEW YORK 17, N. Y.

Wet-Cutting Model Also Available for Ultra High Speed Metal Cutting

▲ Mention Item NED-5494 when writing ▲

★

Tons or Ounces

—parts of any size can be Metco-Metallized

NO WORN OR CORRODED SURFACE is too large to reclaim...few new parts are so small that they cannot be given longer original life—with METCO Metallizing. This cast iron dryer drum, 12 ft. in length and 5 ft. in diameter, was resurfaced with stainless steel *without dismantling!* Millions of Speed Nuts for aircraft are rust-proofed better and faster with tumbling barrel coatings of zinc. *Three* METCO Metallizing Guns are now available. Which fits your needs?

METCO

MAIL COUPON FOR COMPLETE DETAILS

METALLIZING ENGINEERING CO., INC.
38-24 30TH STREET, LONG ISLAND CITY 1, N.Y.
Send Metco News for August '44 and '43.

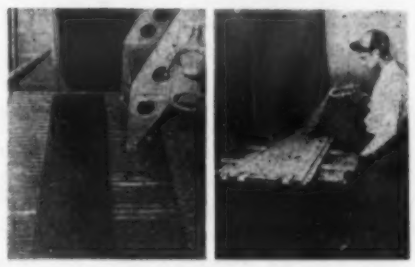
Name
Title
Company
Address
NED 9-44

WORLD'S FINEST METALLIZING EQUIPMENT

▲ Mention Item NED-5495 when writing ▲

New Processes & Materials

NON-SKID FLOOR COATING



Developed as replacement for rubber mats on walkways of military aircraft, Flight Floor non-skid floor coating is made from Thiokol synthetic rubber, ground cork and other ingredients. It is very light in weight and highly resistant to salt water, oxidation, temperature variations and abrasion. Compound is applied at room temperature with open-nozzle paint spray gun and is easily repaired in field. One application only is needed to build up coating of sufficient thickness. Material dries rapidly. Coating developed in laboratory of **The Glenn L. Martin Co.**, Baltimore 3, Md.

▲ Mention Item NED-5496 when writing ▲

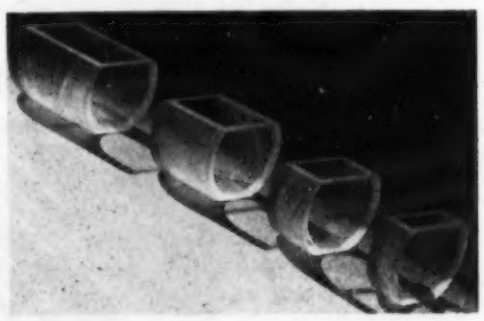
PLATED COATING TESTER

Porosity in plated coatings is readily detected with Fotopar test paper. This material is commonly used for determining porosity of nickel deposited on iron and steel. However, it can also be used to test porosity of chromium, copper, brass and tin over iron and steel; as well as these same platings over copper and brass. Blue spots appear on paper wherever iron or steel is exposed and brown spots appear in case of exposed copper or brass.

Limited in use for some time because of essential needs, this paper is now available in quantities to meet practically all requirements. It is furnished in convenient rolls containing 150 lineal feet 2 inches wide. These rolls are compact, easy to handle and are packed in individual cartons. Made by **Hanson-Van Winkle-Munning Co.**, W. Church St., Matawan, N. J.

▲ Mention Item NED-5497 when writing ▲

PRECISION GLASS TUBING



Accurate to tolerances of plus and minus 0.0002 inches, precision bore glass tubing is produced by Glo-Tech process at cost claimed to be one-third that of previous methods. Standard sizes range from 0.13 to 6 inches in inside diameter and lengths up to 100 inches. Practically any shape of bore is available, including square, hexagonal, oval, conical, concave, curved and fluted. Illustrated are Glo-Tech open type horizontal cells with optical flats fused to each end. Also available are manometers, barometers, viscometers, absorption cells and other scientific instruments made of precision bore tubing. Made by **Fischer & Porter Co.**, 928 County Line Rd., Hatboro, Pa.

▲ Mention Item NED-5498 when writing ▲

TURCO AKTIV DOES THREE JOBS IN ONE SIMPLE OPERATION

When Turco chemists formulated Aktiv, they produced a specialized cement floor cleaner that emulsifies grease and oil thoroughly and quickly. It penetrates deeply into cracks and surface pores, ordinarily uncleanable; dirt comes to the surface, where cold water will flush it away without leaving a trace. What's more, it sanitizes and whitens cement with a non-injurious bleaching action.

Aktiv, a granular material, dissolves completely in water, so that you may make it into a stock solution. Or sprinkle it on a wet floor, work it into cracks and rough spots with broom or brush, hose off and mop with clear water. No hard scrubbing or scraping is necessary. *Aktivating* cement floors is inexpensive. Let the Turco Field Service Man show you. Write us today for Bulletin NED 9. Ask about other Turco specialized products.

TURCO
INDUSTRIAL CHEMICAL COMPOUNDS

Main Office and Factory: 6135 S. Central Ave., Los Angeles 1 • *Southern Factory:* 1606 Henderson St., Houston 10, Tex. • *Chicago Factory:* 125 W. 46th St., Chicago • *Service-Men and Warehouse Stocks in All Principal Cities*

▲ Mention Item NED-5499 when writing ▲

Protect vital manpower in your plant by marking aisles the efficient M-B way. New motorless marker simplifies job. Can also be used for striping safety zones or storage areas. Quiet in operation. Used by leading plants everywhere. Write for bulletin.

Meili-Blumberg Corp., Box NE-9, New Holstein, Wis.

▲ Mention Item NED-5500 when writing ▲

TESTING SIEVES

NEWARK for ACCURACY

That Report True Facts

We can think of numerous test operations where the precision of screening is fully as important as accuracy in chemical or fire analysis.

Test sieves are key equipment in the control laboratory. They should be the best obtainable. The strongest. The most durable. With the highest maintained accuracy.

What have NEWARK Testing Sieves to offer? Cornerless — with no crevices between cloth and frame to catch particles. All soldering outside—to facilitate cloth removal. Cloth attached directly to the sieve frame—not to an extra rim—to prevent distortion and maintain uniform tautness. Strongly built frames.

These are useful characteristics of NEWARK Testing Sieves.

NEWARK WIRE CLOTH COMPANY
332 Verona Avenue, Newark 4, N. J.

9-NWC-1

▲ Mention Item NED-5501 when writing ▲

DROP FORGING

RITCO's long experience in die sinking and drop forging assures strong parts accurately made to your specifications.

Remember RITCO *for*
SPECIAL BOLTS, NUTS & STUDS
DROP FORGING & DIE SINKING
SCREW MACHINE PRODUCTS
SPRAYED METAL SERVICE
HEAT TREATING • PARKERIZING

Estimates gladly submitted. Send samples or blueprints. Catalog on Request.

RHODE ISLAND TOOL CO.
148 West River St., Providence, Rhode Island
Serving American Industry Since 1834

RITCO

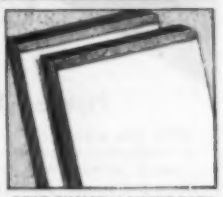
▲ Mention Item NED-5502 when writing ▲

TRIANGLES • LAYOUT PADS • COMPASSES

"BIG-BOW" PENCIL COMPASS and DIVIDER
Adjustment for circles of 9" diameter to less than 3/16". Rugged construction for long, accurate service. No. 9040 $4.33

ADJUSTABLE POST TRIANGLE
Angles quickly set anywhere from 0° to 90°. 8" transparent triangle. Secure clamping device. No. 1588..... $4.00

TRANSPARENT TRIANGLES
Professional grade, made of extra heavy, seasoned, clear polished celluloid. Inner edges beveled for finger lift.
No. 1749 (30° x 60°) 6" to 18" $.50 $2.70
No. 1750 (45°) 4" to 18" $.50 $3.50



BEST QUALITY LAYOUT PADS
Finest treated tracing media. Sheets—50 to a pad—easily removed without tearing.
173AA-P.T.M. 9x12 $1.45
173B-P.T.M. 12x18.. 2.55
173C-P.T.M. 18x24.. 4.90

THE FREDERICK POST COMPANY • CHICAGO, ILL.

POST
TOLEDO
BLUE PRINT & PAPER CO.
316 SUPERIOR ST. ADAMS 2664

▲ Mention Item NED-5503 when writing ▲

AMERICA'S "TOPS" IN TIME SWITCH PERFORMANCE

. . . an accurate, durable, self-lubricating time switch for controlling stokers, oil burners, blowers, pumps, valves, air conditioning, etc. . . . for only $13.00 list.

JUST TWO EXPOSED GEARS. All others constantly lubricated because they operate in a sealed oil bath.

DUST PROOF. Because of the sealed-in features, dust has no effect upon the operation.

SLOW SPEED MOTOR. The first and only low priced Time Switch to be timed and operated by slow speed (450 R.P.M.) industrial type self-starting synchronous motors.

SELECTION OF SWITCHES. Switches available: single pole single throw, double pole single throw or single pole double throw.

Send for complete engineering bulletin. Paragon manufactures wide range of industrial timers, time delay relays, panel boards and other electrical equipment.

PARAGON ELECTRIC COMPANY
12 OLD COLONY BUILDING
CHICAGO 5, ILLINOIS

Paragon Chicago
BUILDERS OF ELECTRICAL EQUIPMENT . . . SINCE 1905

▲ Mention Item NED-5504 when writing ▲

KEEP MATERIALS Moving

with Steel-Grip Gloves

With not a moment to be lost, keep men at work and materials moving with Steel-Grip chrome tanned cowhide gloves. Steel ribbons over tough leather; palm and fingers reinforced, double thickness for utmost wear. Handle rough, heavy, sharp materials with speed and safety and sureness. Or what's your problem? Over 4300 proven Steel-Grip safeguards may give you an *immediate* answer. Used by big industrials since 1910. Write for catalog or state your need today.

No. 13319, Steel-Grip steel-reinforced gauntlet gloves for safe, speedy handling of sharp-edged metal sheets, stampings, castings, etc. Chrome tanned cowhide with double palm extending around fore-finger where cutting wear is most. Extra thumb patches on palm and sides. Steel ribbons reinforce all wearing surfaces, prevent injuries, add hours to life even on toughest jobs. $3 per pair. 10% discount in 12 pair lots.

OLD HICKORY STEEL GRIP
MADE IN U.S.A.
REG. U.S. PAT. OFF.
Member National Safety Council

INDUSTRIAL GLOVES COMPANY
17 Garfield Blvd. Danville, Illinois
(In Canada: Safety Supply Company, Toronto)

▲ Mention Item NED-5505 when writing ▲

New Processes & Materials

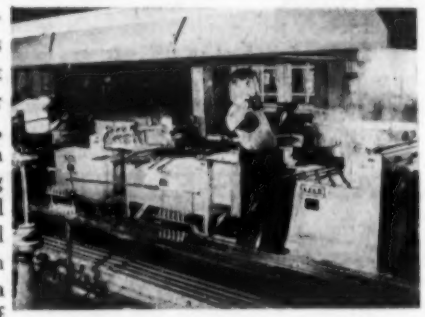
SYNTHETIC RESIN ADHESIVE

Offered as replacement for rubber latex, Pliastic Cement synthetic resin adhesives, may be used to join any of the following materials: paper; cardboard; wood; plywood; Presdwood; asbestos; cotton, wool and hair felt; abrasive grains; tinsel; glass beads; flock; plain or treated fabrics; cork, rockwool and fiberglass insulation; leather; plastics; porcelain; metals; stone and many painted, lacquered and coated surfaces. Application is by brush, dipping, spreader, flow or spray gun.

When dry this adhesive forms film which is semi-transparent, glossy and flexible, with excellent heat sealing properties. When used in liquid state for bonding materials it can be applied on one or both surfaces, speed of setting being dependent upon porosity of materials. It is available in 1, 5, 30 and 55-gallon containers. Made by Paisley Products, Inc., 1770 Canalport Ave., Chicago 16, Ill.

▲ Mention Item NED-5506 when writing ▲

QUENCH FURNACES



Eliminating quench cracks and distortion that occur with oil or water quenching, electric salt bath furnaces are being used for Isothermal treatment of special alloy and carbon steels. Steps in treatment consist of immersion in liquid salt for austenizing at 1500 to 1600 degrees Fahr., followed by immediate immersion in isothermal quench furnace at 400 to 750 degrees Fahr. for transformation. Treatment is concluded in salt bath draw furnace at 950 to 1000 degrees Fahr.

Second step in process represents specific application of isothermal principle. It necessitates very rapid cooling to fixed temperature maintained by furnace which is equipped with system for forced air cooling and violent agitation.

Physical properties of steels are improved. All scaling or decarburization are avoided. Thus S-curve data may be translated directly into mass production procedure. Furnace made by Ajax Electric Co., Frankford Ave. at Delaware Ave., Philadelphia 23, Pa.

▲ Mention Item NED-5507 when writing ▲

FLOOR CLEANER

Absorbing many liquids from floors, including water, oil, grease, syrup, chemicals, inks, wax emulsions and paint ingredients, AleXitE Absorbit floor compound is fireproof, verminproof and sterile. It will absorb several times its weight in liquids. In addition to prolonging life of floors and minimizing skidding and slipping, this compound can be used to reclaim oil or grease soaked shoes, clothing, belting, rope and heat treated parts. It is also an excellent fire smotherer and is recommended for use in fire buckets instead of sand. Made by AleXitE Engineering Co., Alexander Film Bldg., Colorado Springs, Colorado.

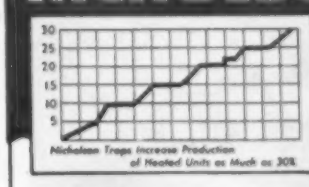
▲ Mention Item NED-5508 when writing ▲

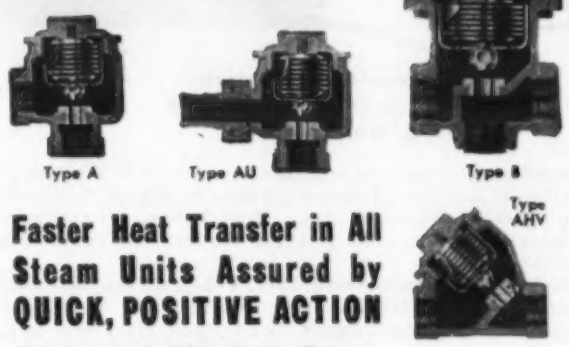
Snap-on revolutionized nut turning with interchangeable sockets. No name in tools means as much in adding speed, precision and safety to every phase of production, maintenance, service.

SNAP-ON TOOLS CORPORATION, 8042-I 28th Avenue, Kenosha, Wis.

▲ Mention Item NED-5509 when writing ▲

PLANT TESTS SHOW NICHOLSON TRAPS Raise PRODUCTION





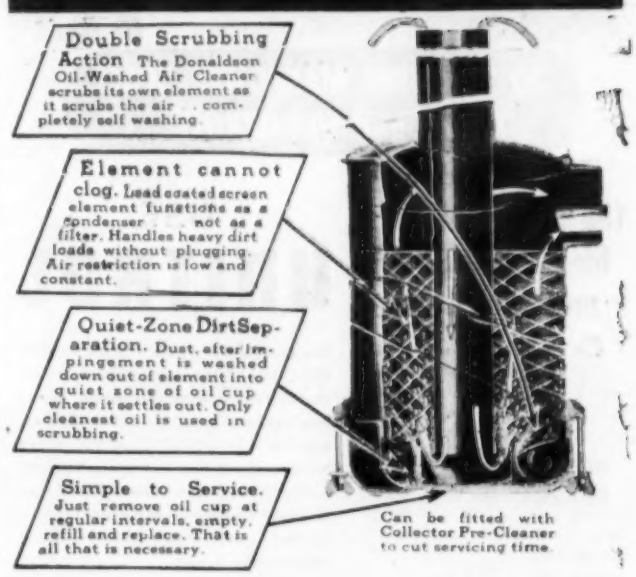
Faster Heat Transfer in All Steam Units Assured by QUICK, POSITIVE ACTION

Nicholson Industrial Steam Traps are sturdily designed for severe service. Two to six times greater valve area and capacity than average traps. No Air Binding. No Freeze-Ups. No Adjustment. No Dribbling. No Water-Logged Units. Hardened Stainless Steel Valves and Seats. 5 types—sizes ¼" to 2"—pressures vacuum to 225 lb. Bulletin 843.

W. H. NICHOLSON & CO.
162 OREGON ST., WILKES-BARRE, PA.

▲ Mention Item NED-5510 when writing ▲

The DONALDSON Oil-Washed AIR CLEANER HAS NO RIVAL IN EASE of MAINTENANCE



Any cleaner is only as effective as its maintenance. The Donaldson Air Cleaner is easier to service and therefore is serviced as it should be. Just one simple operation is all that's required. At regular intervals depending on dust conditions . . . remove oil cup, empty, refill, and replace! No cleaning of the element necessary . . . no trouble with clogged filters because there are none.

A Donaldson engineered installation means the air cleaner is instantly and easily accessible, encouraging the operator to stick to a servicing schedule.

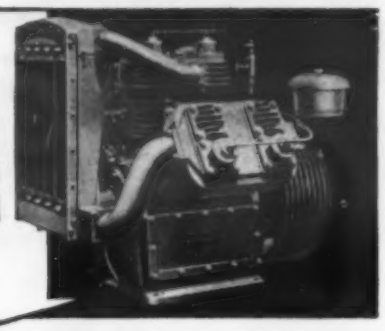
DONALDSON COMPANY, Inc.
666 PELHAM BLVD. SAINT PAUL 4, MINNESOTA

Air Cleaner Engineering Service Available to You. Write Us.

DONALDSON Oil-Washed AIR CLEANERS

▲ Mention Item NED-5511 when writing ▲

IN QUICK !



No Special Foundation
No Cooling Water Piping
No Space Problem

A *quick* answer to your increased air demand! Worthington Radial Air Compressors are easy to install. Compact—no space problem, no special foundation. Air-cooled—no water piping needed. Feather Valves*—no imitations equal them.

Models: direct connected, bare, V-belt driven, unabloc. Bulletin H-620-B16F. Worthington Pump and Machinery Corporation, Standard Products Division, Harrison, N. J.

AC 4-11

THERE'S A WORTHINGTON MAN NEAR EVERY INSTALLATION

WORTH BEHIND THE NAME WORTHINGTON

*Reg. U. S. Pat. Off.

36 DISTRICT OFFICES THROUGHOUT THE U. S.

▲ Mention Item NED-5512 when writing ▲

The Filing Cabinet Idea applied to motor control

Unitrol is built up in much the same way as the familiar filing cabinet system.

The skeleton starter or switch is fitted into a frame with a door in front.

This Unitrol "unit" is fitted into a section and sections are placed side by side, as many as you want as in sketch at bottom.

Like your filing cabinet system, the contents of each "drawer" are easily changed or placed in other "drawers". Sections can be rearranged, moved elsewhere, or new ones added. Unitrol is the flexible, versatile system of housing motor control for all time, ready at any time to meet all needs. You should investigate it today.

USE UNITROL

You can begin any time to put in UNITROL, the *better* way to house, install and systematize motor control. If you are buying control for new machines, ask for it in Unitrol. Then you won't have to spend time and manpower on wall or floor preparation. Unitrol can be placed anywhere in the plant ready for work the moment electrical connections are made.

If you are moving equipment around because of a production changeover, make it an opportunity to house the control in Unitrol. Then your inspection and service men can accomplish more because the control will be grouped in a compact Unitrol "center", convenient of access, easy to service, hard to overlook. Tremendous space savings result because Unitrol can accommodate 2 or 3 times as much control in equivalent floor space.

Unitrol is the modern method of housing control, ready made, ready for use, yet built to individual need from unitized, sectionalized members that you can add to, subtract from or rearrange with complete freedom. Many industrials, wanting to be *first* with the *right* answer for today *and* tomorrow, are swinging to Unitrol. For the facts behind the swing, write today for the big free Unitrol book. CUTLER-HAMMER, Inc., 1377 St. Paul Ave., Milwaukee 1, Wisconsin. Associate: Canadian Cutler-Hammer, Ltd., Toronto, Ont.

CUTLER-HAMMER UNITROL C-H

Copyright 1944 Cutler-Hammer, Inc.

▲ Mention Item NED-5513 when writing ▲

NEW Applications

SALVAGING DIE CASTINGS

Normally difficult to repair, zinc die castings can be effectively and easily reclaimed with improved No. 195 gas welding rod. It has lower melting point and bonding temperature than original alloy so that it can be applied readily without damaging parent metal. It is said to be easy to use for build up, has higher tensile strength and matches hardness of die castings.

Illustration shows repair of zinc base of die cast fuel pump. Top section had broken off. It was built up easily with rod and Autochemic Eutector flux. Welding rod made by **Eutectic Welding Alloys Co.**, 40 Worth St., New York 13, N. Y.

▲ Mention Item NED-5514 when writing ▲

STAINLESS ELECTRODES

Performing equally well on alternating or direct current in all positions, AC-DC stainless steel arc welding electrodes weld every stainless analysis. They feature low spatter loss, easily removed slag and instant arc establishment. Welds made in flat, vertical and overhead positions are of accepted contour. Physical and corrosive resisting properties will meet all requirements. Made by **The Alloy Rods Co.**, 510 Prospect St., York, Pa.

▲ Mention Item NED-5515 when writing ▲

INSULATED CONDUIT

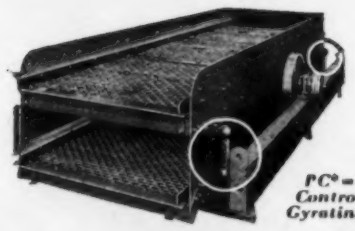
Reinforced full welded lock seam extending spirally entire length of each section is improved feature of helical corrugated conduit housing for line of prefabricated insulated pipe units. Automatic machine weld is made at factory before galvanizing, assuring permanently pressure tight, waterproof structure. Sections are 21 feet long completely fabricated with pipe or pipes as specified, insulation and aligning pipe supports. Conduit ends are expanded smooth for distance of 3 feet, removing corrugations to facilitate tight field connection of sections. New drive coupler is adaptable to mechanical or welded closure with minimum of field labor.

Insulated conduit is available in several types of construction for piping steam, hot water, oil, or refrigerated process liquids. Installation may be above surface or underground, the latter requiring only narrow, shallow trench, minimizing excavation and backfill. Made by **The Ric-wiL Co.**, 1572 Union Commerce Bldg., Cleveland, O.

▲ Mention Item NED-5516 when writing ▲

SECO'S *PC** PAYS OFF!

EFFICIENTLY SCREENS MORE TONS PER HOUR—WET OR DRY MATERIALS



PC = Positive Control of the Gyrating Action*

BECAUSE EVERY INCH OF SCREEN GOES TO WORK

Seco's PC sets up a surer, sharper whip over every inch of screen, thus driving materials more quickly and accurately through the meshes and Seco's patented Auxiliary Vibrator enables efficient screening of damp, sticky materials. Seco screens are in use everywhere. Over 150 models available.

Send for Free Catalog Today! Dept. D

SECO SCREEN EQUIPMENT CO., INC.
9 Lafayette Avenue, Buffalo 13, N. Y.

▲ Mention Item NED-5517 when writing ▲

Hold on, there!

Bands Everything—
Hose—Pipe—Boxes—Barrels

With this compact tool weighing only 3½ lbs., portable anywhere, a continuous strip of steel band and buckles to fit, you can repair leaks or breaks on pipe or hose, bind short lengths together, quickly, for a few cents. BAND-IT saves time, materials, money. A handy every-ready *necessity!*

Saves Materials—Replacements

BAND-IT is always ready in emergencies to repair leaks, cracks or breaks in pipe or hose, saving valuable materials, preventing shutdowns or waiting for replacements. Useful for any binding or supporting or reinforcing job. A thousand uses! Bands any diameter from ¼" to 30'. Why wait? Leaks won't! *Send for complete details.*

AMERACO INDUSTRIAL SPECIALTIES
122 S. Michigan Ave.—Dept. E—Chicago 3, Ill.

▲ Mention Item NED-5518 when writing ▲

The float in the Sight Alarm moves up and down in direct proportion to flow rate changes. At any points you choose in the flow range it will operate an electrical switch to light an electric lamp, to sound an alarm, or to stop or start electrical equipment. Highly sensitive . . . accurate . . . dependable. Cast in all metals from ¼" size and up. Available also without the alarm attachment as a flow rate indicator. Send for bulletin 92-A which gives the interesting details.

ROTA-SIGHT FLOW ALARM

FISCHER & PORTER CO.
2809 County Line Rd., Hatboro, Pa.

▲ Mention Item NED-5519 when writing ▲

BEFORE YOU PUT HOLES IN

SHEETS
ANGLES
CHANNELS

BY *any* METHOD . . . *investigate*

WALES

HOLE PUNCHING EQUIPMENT

FEATURES

1. Usual time-consuming adjustments of conventional set-ups are eliminated.
2. Punch and die held in alignment by holder.
3. Each unit is independent and self-contained.
4. Straight line, staggered or scattered patterns punched with same units.
5. Same units may be used interchangeably on press brake & stamping presses.
6. Nothing attached to press ram.
7. Individual units may be instantly removed or reset.
8. Interchangeable punches.
9. Die setting time and press "down time" reduced to minutes.
10. Same units may be used and reused in active patterns.

● Take up this invitation . . . putting your hole punching problems up to Wales-Strippit.

Hundreds of metal fabricators are now using Wales Equipment *profitably.*

Wales-Strippit manufactures a complete line of hole punching units and are prepared to develop and manufacture hole punching equipment for special operations and techniques.

"There's Always Something New in the Wales Line."

Write for Catalog C.

WALES-STRIPPIT CORP.
363 PAYNE AVENUE NORTH TONAWANDA, N. Y.

▲ Mention Item NED-5520 when writing ▲

LYON-*Raymond*

HYDRAULIC PUMPS

hand or foot operated

ARE Different . . .

and here are the reasons why:

1. Higher efficiency.
2. Pressure range from 1,000 to 10,000 lbs. per sq. in.
3. Single or 2-speed.
4. Large volume of oil per stroke.
5. Trouble free.

Write for literature which includes designing data.

LYON-*Raymond* Corporation

374 Madison St., Greene, N. Y.

Designers & Manufacturers of Hydraulically Operated Material Handling Equipment and Hydraulic Devices

▲ Mention Item NED-5521 when writing ▲

FOR REDUCED MACHINING COSTS on *Hollow Cut-off** and *"Piston-Grooving"*

Standard Carboloy Tools

Here are two styles of standard-design Carboloy Tools producing outstanding results in two specialized fields of use:

1. Cut-Off Tools: Designed to give maximum tool life, good finish, at low tool cost per piece on all work requiring *cut-off to hollow cores. Available in 5 sizes starting at 5/8" x 1 1/4".

2. "Piston-grooving" Tools: For the grooving of pistons and other parts where close tolerances, "mirror-finish", and "dead sharp" corners, must be obtained. Available in standardized design, at established prices based upon tolerances required.

CARBOLOY COMPANY, Inc.

11163 E. 8 Mile Blvd., Detroit 32, Mich.

CARBOLOY CEMENTED CARBIDES — TOOLS · DIES · DRESSERS · CORE BITS · MASONRY DRILLS · WEAR RESISTANT PARTS

FOR THE MANUFACTURING · MINING · TRANSPORTATION · CONSTRUCTION INDUSTRIES

▲ Mention Item NED-5522 when writing ▲

For the First Time...

STANDARDIZED AIR GAGE SPINDLES AND COMPONENTS

WRITE YOUR OWN SPECS!

Sheffield Precisionaire spindles, adapters, etc., within certain limits, have been STANDARDIZED so that any user can make up his own specifications almost as easily as he does for AGD plug gages.

Engineering time and charges are eliminated on STANDARD spindles and components. Delivery is shortened considerably. Components are interchangeable within certain size ranges which means minimum initial purchases and gage inventories.

Write for Engineering Data No. 12 on Sheffield STANDARDIZED Precisionaire Components and SPECIAL applications.

THE SHEFFIELD CORPORATION

Dayton 1, Ohio, U.S.A.

MACHINE TOOLS · GAGES · MEASURING INSTRUMENTS · CONTRACT SERVICES

▲ Mention Item NED-5523 when writing ▲

NEW *Literature* AND *Catalogs*

AUTOMATIC WATER STILLS—6-page illustrated condensed catalog No. D contains information about Barnstead single, double, triple, extra duty and type Q stills operated by gas, steam or electricity—issued by The Barnstead Still & Sterilizer Co., 38 Lanesville Terrace, Forest Hills, Boston, Mass.

▲ Mention Item NED-5524 when writing ▲

PLASTICS STOCK MOLDS—182-page illustrated catalog, "Plastics Stock Molds" lists nearly 1600 stock molds now in possession of scores of different firms throughout country, as well as nearly 200 standardized extruded cross-sections and standard laminated sheets, rods and tubes—stock molds are classified according to type of product molded in them—price is $5.00 per copy—issued by Modern Plastics Magazine, 121 E. Forty-first St., New York 17, N. Y.

▲ Mention Item NED-5525 when writing ▲

OPEN STEEL FLOORING—24-page illustrated booklet presents complete data on open steel grating and stair treads of riveted and welded types—issued by Wm. F. Klemp Co., 6607 S. Melvina Ave., Chicago 38, Ill.

▲ Mention Item NED-5526 when writing ▲

PILOT LIGHT ASSEMBLIES—24-page illustrated data book describes Gothard pilot light assemblies for panel board and instrument signaling—issued by Gothard Mfg. Co., 1380 North Ninth St., Springfield, Ill.

▲ Mention Item NED-5527 when writing ▲

POST TYPE ROTAMETERS—8-page illustrated bulletin is descriptive of post type Rotameters which are designed for severe service use in process industries where strength, rigidity, ability to carry heavy piping loads, easy readability and adaptability for varying piping arrangements is important—issued by Fischer & Porter Co., 928 County Line Rd., Hatboro, Pa.

▲ Mention Item NED-5528 when writing ▲

WORM GEAR REDUCTION UNITS—16-page illustrated catalog No. 300 is comprehensive exposition of Speedaire fan cooled worm gear reduction units—principle of operation is fully detailed by means of cutaway photographs, charts, diagrams and engineering tables—issued by The Cleveland Worm & Gear Co. 3283 E. Eightieth St., Cleveland 4, O.

▲ Mention Item NED-5529 when writing ▲

COMBUSTION CONTROL—12-page illustrated bulletin No. BD44 discusses problems of modern power plant and points out value of automatic or semi-automatic regulation of furnace draft, fuel feed and steam pressure—bulletin offers complete system for co-ordinating these three phases of boiler operation—issued by The Engineer Co., 75 West St., New York 6, N. Y.

▲ Mention Item NED-5530 when writing ▲

BIG or SMALL Consumers

They're All Equally Important to STRONGHOLD SCREW PRODUCTS

"Gentlemen:
"I must say I was surprised and pleased to receive your letter. Imagine a concern as large as yours asking for post-war business at the present time under the hardships which must confront you in the way of raw materials, etc. Yours is the only company which has written in regard to our business, small though it has been with you, and believe me when priority restrictions are lifted from inventory stocks, we look forward to having a complete stock of 'Stronghold' items."
(Signature upon request)

IT IS A matter of policy with IMPORTANCE, reall orders or inquiries pertaining to fastening products are of EQUAL IMPORTANCE, regardless of the size of the order or the size of the company from which it comes.

STRONGHOLD serves many of America's industrial giants. It also serves, with equal promptness and concern, thousands of smaller companies whose use of fasteners is limited.

Your inquiries for samples or prices will be answered promptly. It's faster to telephone—

Call WHitehall 4680.

MANUFACTURERS SCREW PRODUCTS
218 West Hubbard St., Chicago 10, Ill.

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ALL IN THE SAME PACKAGE

with

SECURITY

This application shows how Signode adds rigidity to a light lumber crate, affording full adequate protection for a shipment of steel shelving.

• PACKAGES • CRATES
• CARTONS • SKIDS
• BUNDLES • BOXES

Signode Methods of bulk-binding are widely used in the movement of carload shipments.

War shipments have been re-inforced with tensioned steelstrapping to make absolutely certain of safe arrival—SECURITY. But, Signode's shipping engineers have also showed wartime shippers how to secure—as important "by-products"—actual cash savings through lower material and labor costs and a speed-up of the packing operations.

Write for a descriptive booklet explaining Signode applications to a great variety of peacetime products.

SIGNODE STEEL STRAPPING CO.

2632 N. Western Ave., Chicago 47, Illinois

Brooklyn, N. Y.: 378 Furman St. • San Francisco, Calif.: 467 Bryant St.

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PAGE *Stainless Steel* WIRE

● If there is a way for you to trim production costs by using Shaped Stainless Steel Wire, PAGE can help you find the way.

Wire has *always* been the business of PAGE. Stainless Steel Wire has been a PAGE product since the early days of Stainless. And tremendous demands of war production have given PAGE intensive experience in the drawing of Stainless—in a wide variety of shapes.

PAGE Stainless Wire—shaped to your specification—is drawn in sectional areas up to .250" square, in widths to 3/8 inches. If PAGE Shaped Wire can be used as a part of your product, the result will probably be lower production costs for you. That's why it may be well worth your while to . . .

Get in touch with Page!

PAGE STEEL AND WIRE DIVISION

Plant: Monessen, Pa.

Offices: Monessen, Pa., Atlanta, Chicago, Denver, Los Angeles, New York, Pittsburgh, Portland, San Francisco

In Business for Your Safety

ACCO — AMERICAN CHAIN & CABLE COMPANY, Inc. BRIDGEPORT • CONNECTICUT

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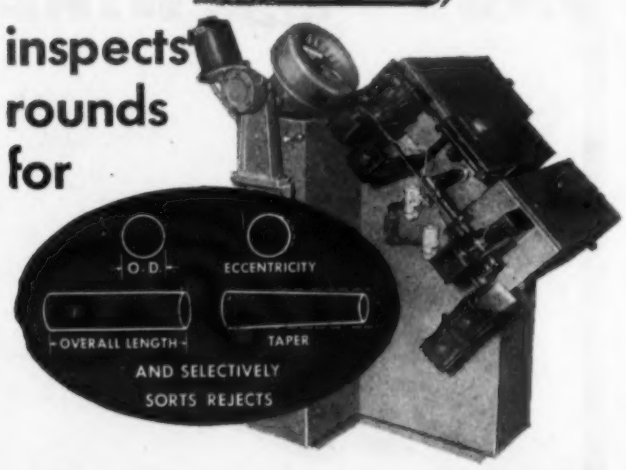
Chicago Rivet AND MACHINE CO.
9610 W. JACKSON BLVD., BELLWOOD, ILL. (Chicago Suburb)
TUBULAR AND SPLIT RIVETS IN ALL RIVET METALS

▲ Mention Item NED-5537 when writing ▲

This Electronic Machine *Automatically* inspects rounds for



Checking critical dimensions of screw-machine and centerless grinder products is slow and costly when done by hand. But . . . with a Hurletron WDLE-100 these dimensions are automatically measured in a fraction of a second. Accuracies of .0001 are preserved without variation, and parts not meeting specified tolerances are automatically rejected.

OPERATION: Using light as a lever, electronic photo-electric equipment analyzes focal point of the light as a means of determining critical dimensions. Hopper fed with automatic acceptance and rejection. Can be equipped to selectively sort rejects in increments as small as .0001.

TOLERANCES: Hurletron WDLE-100 will check tolerances as small as .0001 without variation.

SPEED: Speeds as high as 145 pieces per minute on a simple ¾" part.

ECONOMY: Saves time and manpower. Quickly pays for itself. One manufacturer's analysis shows HURLETRON WDLE-100 would do 41 man-years' work in 1 year.

Hurletron WDLE-100 is demonstrating its remarkable efficiency and economy in many important war industries and it is only one of many types of electronic inspection and control equipment designed and built by us. If you have a problem involving inspection or control, our engineers will gladly work with you and submit recommendations and estimates without obligation.

HURLETRON

ELECTRONIC INSPECTION AND CONTROL EQUIPMENT

ELECTRIC EYE EQUIPMENT COMPANY
7 W. Fairchild Street, Danville, Illinois

▲ Mention Item NED-5538 when writng ▲

New Literature—Continued

FLOOR SURFACER—4-page illustrated bulletin presents information on Awog chemical solution for making floors acid, water, oil and grease resistant—material is recommended for new floors, for overlays over concrete, brick and stone or wood and for repairing or resurfacing areas of any size—issued by Flexrock Co., 3603 Filbert St., Philadelphia 4, Pa.

▲ Mention Item NED-5539 when writing ▲

LATHES—8-page illustrated catalog No. 150 covers line of engine lathes, toolroom lathes and precision turret lathes for practically all types of production, toolroom and maintenance work—information is also included on lathe attachments for special classes of work—issued by South Bend Lathe Works, Dept. N3, South Bend 22, Ind.

▲ Mention Item NED-5540 when writing ▲

REAMING TOOLS—32-page illustrated catalog describes simplicity of design and operation of Madison adjustable reaming tools—gives complete data on grinding instructions and reamer uses—issued by Madison Mfg. Co., Muskegon, Mich.

▲ Mention Item NED-5541 when writing ▲

ROTARY FILES—26-page illustrated catalog discusses hand cut rotary files—outlines history of company in production of these files—stresses value of individual craftsmanship—various types of files are shown and described—issued by The Rotary File Co., Stratford, Conn.

▲ Mention Item NED-5542 when writing ▲

INDUSTRIAL EQUIPMENT—32-page illustrated booklet is entitled "Production for War"—stresses part that company is playing in producing and delivering the weapons for victory—application of various types of equipment in different phases of war is pictured—issued by Worthington Pump & Machinery Corp., 427 Worthington Ave., Harrison, N. J.

▲ Mention Item NED-5543 when writing ▲

PLASTIC & FIBER PARTS—12-page illustrated bulletin No. FP43 is concerned with design and fabrication of laminated and molded phenolic plastics and vulcanized fiber parts—issued by Continental-Diamond Fibre Co., Newark 30, Del.

▲ Mention Item NED-5544 when writing ▲

INDUSTRIAL TRUCKS—4-page illustrated booklet No. M-100-N discusses material handling in factory, warehouse and freight terminal—describes four wheel hand trucks or tractor trailers, pipe trucks, cargo boards and other material handling devices—issued by Madsen Iron Works, Huntington Park, Calif.

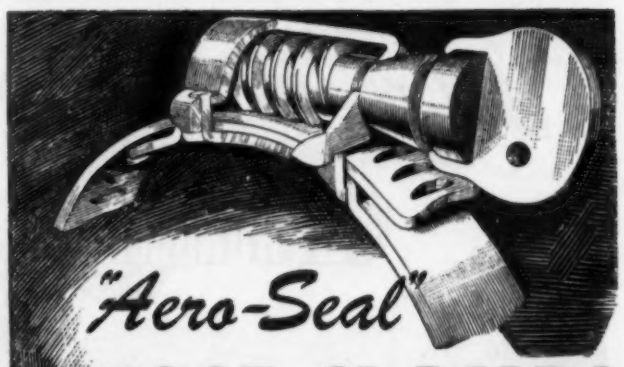
▲ Mention Item NED-5545 when writing ▲

VALVES—11 x 17-inch chart lists eleven tips on handling and care of valves— copy is illustrated by graphic sketches showing right and wrong way to handle each situation—issued by Reading-Pratt & Cady Div., American Chain & Cable Co., Bridgeport 2, Conn.

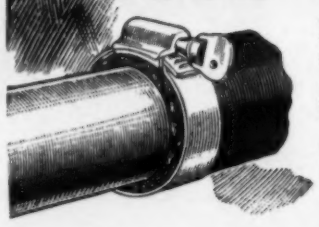
▲ Mention Item NED-5546 when writing ▲

AIR CONDITIONING—8-page illustrated folder No. AC-162 covers wide range of equipment for temperature and humidity control, refrigeration and industrial heating—issued by Carrier Corp., 302 S. Geddes St., Syracuse 1, N. Y.

▲ Mention Item NED-5547 when writing ▲



"Aero-Seal" HOSE CLAMPS



Distinctive worm gear tightening action provides powerful belt-like pull-up. Uniform pressure all around prevents leaks. Can be put on or taken off hose in place on pipe. Can be re-used. No loose parts. Compact design. Extremely long take-up. Made in sizes from ½" up. *Write for circular.*

Proved outstandingly reliable in severe service on aircraft fuel, oil, and coolant lines.

AIRCRAFT Standard PARTS CO.

Aircraft Standard Parts Co.
1753J NINETEENTH AVE., ROCKFORD, ILL.

▲ Mention Item NED-5548 when writing ▲

GUARD AGAINST Insulation Failures WITH THE HOLTZER-CABOT Electronic INSULATION RESISTANCE TESTER

Protect your electrical equipment from possible insulation failures by making periodic tests with the Holtzer-Cabot insulation resistance tester. A self-contained, portable unit weighing only 3 lbs., it is always ready to use in the plant, laboratory or field. The hand crank generator delivers 500 volts D.C. testing voltage . . . eliminates batteries and external power supply. Two indicator buttons light up when generator is delivering correct testing voltage. Electronic voltage regulation assures uniform testing voltage over a wide range of cranking speeds. Guard circuit eliminates surface leakage from affecting measurements. Wide range . . . 0 to 100 megohms. Scale is spaced for easy reading.

Get the complete story on Holtzer-Cabot insulation resistance tester. Write for bulletin today.

HOLTZER-CABOT
Division of First Industrial Corporation
400 STUART STREET, BOSTON 17, MASSACHUSETTS

▲ Mention Item NED-5549 when writing ▲

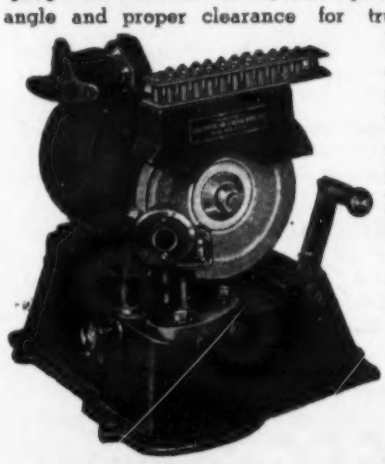
BLACK DIAMOND
PRECISION DRILL GRINDERS

POST-WAR NEEDS FOR SMALL SHARP DRILLS WILL BE JUST AS GREAT AS TODAY'S

SAVE 50%—PLUS—ON DRILL GRINDING

Motor driven, these highly efficient Black Diamond Grinders are doing valiant service in hundreds of war plants throughout the nation.

They not only produce quantities of perfectly sharpened small gauge and fractional drills, with lips of uniform length, correct angle and proper clearance for true, accurate drilling but release skilled mechanics for more important work.



The Web thinner, an important attachment, corrects for the proper grinding. Notched, Colton or so called Crankshaft points . . . and the diamond dresser keeps the grinding wheel always sharp.

Write for Bulletin 12

BLACK DIAMOND SAW & MACHINE WORKS, Inc.
NATICK, MASSACHUSETTS

▲ Mention Item NED-5550 when writing ▲

FAST HEATING
*UNIFORM TEMPERATURE
HANDY
PORTABLE

● The heating element in the Temco furnace operates with unusual speed. A working temperature of 1500° F. is attained in only 30 minutes and intermittent peak loads of 1850° F. are within the practical range of this rugged, long life furnace. A four point switch provides temperature control in four ranges and adjustable rheostat bands allow close heat selection within any range. The accurate, dependable pyrometer is calibrated to 2000° F. and 1100° C. in 50° increments.

*MUFFLE CHAMBER has the exclusive feature of an embedded heating element which covers all four sides of the heating chamber. This eliminates "cold spots", assures a uniform temperature in every part of the chamber, and protects the elements against damage and oxidation.

Temco furnaces are built for either 115 V. or 230 V. Current consumption, 1200 watt maximum. Heating chamber 4" wide, 3¾" high and deep. Outside dimensions 8¾x13½x10". Shipping weight 30 lbs.

COMPLETE WITH PYROMETER (115 V.).....$42.50
For 230 V.—$5.00 additional

See your supply house or write

THERMO ELECTRIC MFG. CO., 484 W. Locust Street, Dubuque, Iowa

TEMCO ELECTRIC FURNACE

▲ Mention Item NED-5551 when writing ▲

DUAL PURPOSE

Designed for Either a High Pressure Drop and Small Volume or a Low Pressure Drop and Large Volume

No. 608 (Patent Applied For)

Operates Beyond the Limitations of a Single Valve

Close control of volume and pressure can be obtained with this dual-purpose hand wheel operated R-S Butterfly Valve. The large vane seats against the body of the valve while the smaller vane is free revolving. Both vanes are hand wheel operated. Only four to six revolutions of a hand wheel are required for complete opening or closing.

15 to 900 psi

Detailed information and catalog furnished upon request.

VALVE DIVISION

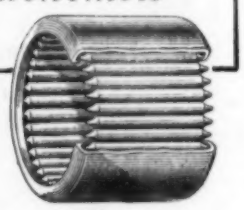
R-S PRODUCTS CORPORATION

4527 Germantown Ave. • Philadelphia 44, Pa.

R-S Streamlined BUTTERFLY VALVES

▲ Mention Item NED-5552 when writing ▲

4 Ways Needle Bearings Promote Cost Economies



TYPE DC

Low cost is one of the surprising features of Torrington Needle Bearings.

For with all their advantages, they have the lowest cost per given load of any anti-friction bearing!

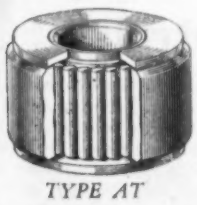
In addition to low *first cost*, they offer the designer and production engineer several other important cost economies:

For example, their high capacity and small size permit savings in space, weight and *material costs* of surrounding members.

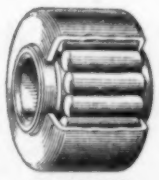
Then, the ease and speed with which they are handled and installed on the assembly line spells important savings in production time and labor costs. Furthermore, use of snap rings or staking the bearings is unnecessary—another contribution to lower costs.

A third factor, the efficient lubrication of Torrington Needle Bearings, also contributes to cost savings as ample lubrication is readily provided without the need for complex or expensive lubricating *systems*. This simplifies both design and production jobs.

Finally, the use of Needle Bearings contributes to overall cost reduction in the longer service life and increased operating efficiency they make possible. These are cost economies *your customers* will be sure to appreciate in lower operating costs as well as in reduced maintenance, repair and replacement. Our Engineering Department will be glad to interpret these advantages in terms of *your own* design and product plans. Or if you'd like additional information on other Needle Bearing advantages, send for Catalog No. 30-A. A copy will be sent promptly without obligation.

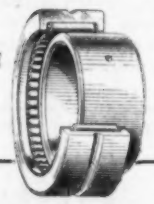


TYPE AT



TYPE PN

TYPE NCS



TYPE FDT

THE TORRINGTON COMPANY

TORRINGTON, CONN.

THE TORRINGTON CO., BANTAM BEARINGS DIVISION

SOUTH BEND 21, IND.

"Makers of Needle Bearings and Needle Bearing Rollers"

New York Boston Philadelphia Detroit
Cleveland Seattle Chicago San Francisco
Los Angeles Toronto London, England

▲ Mention Item NED-5553 when writing ▲

New Literature—Continued

PUMP VALVES—4-page illustrated bulletin No. RD-193-N sets forth advantages of ball-guided spherical valve in operation of any make of reciprocating pump—covers construction, lists stock metal combinations and gives stock sizes and data on Royal Crown pump valves—issued by Madsen Iron Works, Huntington Park, Calif.

▲ Mention Item NED-5554 when writing ▲

ELECTRONIC PRODUCTS—24-page illustrated booklet is intended as general introduction to company and its products, to tell what it is doing in war effort and plans for industry when peace comes—issued by North American Philips Co., Pershing Sq. Bldg., Park Ave., at 42nd St., New York, N. Y.

▲ Mention Item NED-5555 when writing ▲

DRILL STEELS—8-page illustrated bulletin contains information on hollow and solid drill steels in rounds, hexagons and quarter octagons—specifications and working and heat treating instructions are listed—issued by Jessop Steel Co., 555 Green St., Washington, Pa.

▲ Mention Item NED-5556 when writing ▲

ELECTRICAL PRODUCTS—84-page illustrated catalog No. 441 gives basic information, list prices and dimensions on safety switches, light and power panelboards, switchboards, circuit breaker panelboards, Kbl-Duct and BUStribution duct—issued by BullDog Electric Products Co., 7610 Jos. Campau Ave., Detroit, Mich.

▲ Mention Item NED-5557 when writing ▲

CONVEYOR BELT IDLER—16-page illustrated booklet No. 1915 announces "100" belt conveyor idler and gives detailed information on various sizes available in several types—history of company in production of belt conveyors is outlined—issued by Link-Belt Co., Dept. NED, 307 N. Michigan Ave., Chicago 1, Ill.

▲ Mention Item NED-5558 when writing ▲

SANDERS—Two illustrated folders describe advantages of Sterling 1000 portable electric sander and air driven Sterling model E Speed-Bloc sander—include complete specifications and details of operation—issued by Sterling Tool Products Co., 155 E. Ohio St., Chicago 11, Ill.

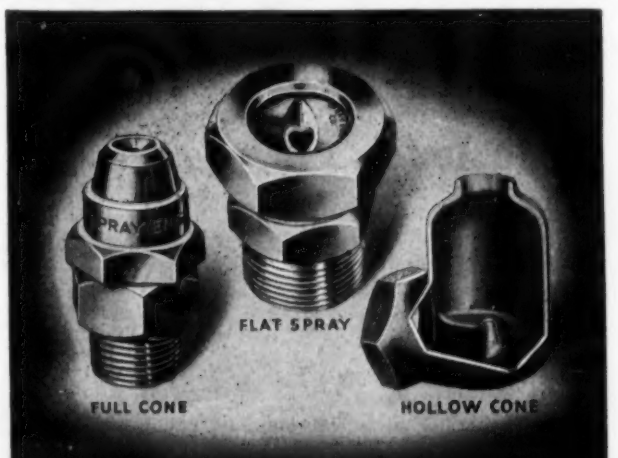
▲ Mention Item NED-5559 when writing ▲

MEASURING INSTRUMENTS—44-page illustrated catalog No. EM-95 describes instruments for making precise electrolytic conductivity measurements in plant, laboratory or classroom—includes signalling conductivity controller and several industrial cells which have become available recently—issued by Leeds & Northrup Co., 4934 Stenton Ave., Philadelphia 44, Pa.

▲ Mention Item NED-5560 when writing ▲

SAFETY STANDARDS—32-page booklet, "Safety in Electric and Gas Welding and Cutting Operations", is designed to serve as guide for protection of individual operator from injury or illness and for protection of property from fire or other damage arising out of improper methods of installation, operation or maintenance of welding and cutting equipment—price of single copy is 40 cents—issued by American Standards Association, 29 West Thirty-ninth St., New York 18, N. Y.

▲ Mention Item NED-5561 when writing ▲



SPRACO NOZZLES

Write for NOZZLE CATALOG *to*

SPRAY ENGINEERING CO.

106 CENTRAL STREET • SOMERVILLE 45, MASS.

▲ Mention Item NED-5562 when writing ▲

COMMON SENSE

urges the use of

UNBRAKO

KNURLED SOCKET HEAD CAP SCREW

Time is an important cost factor in any kind of work. Look at the KNURLED HEAD on this "UNBRAKO" Socket Cap Screw; realize how firmly a mechanic's fingers grip it and how that enables him to turn it faster and farther before he need apply a wrench.

Learn more about the precision accuracy of the "UNBRAKO" Knurled Socket Head Cap Screw; the hardness of its hex socket; its great tensile strength and the perfection of its threads.

Send for the "UNBRAKO" Catalog of Screw Products giving full information about styles, sizes and prices.

"UNBRAKO" Knurled Socket Head Cap Screw. Pat'd. and Patents Pending.

The Knurling of Socket Screws originated with the "UNBRAKO" years ago.

STANDARD PRESSED STEEL CO.

JENKINTOWN, PENNA. BOX 881

BRANCHES

BOSTON • DETROIT • INDIANAPOLIS • CHICAGO • ST. LOUIS • SAN FRANCISCO

OVER 40 YEARS IN BUSINESS

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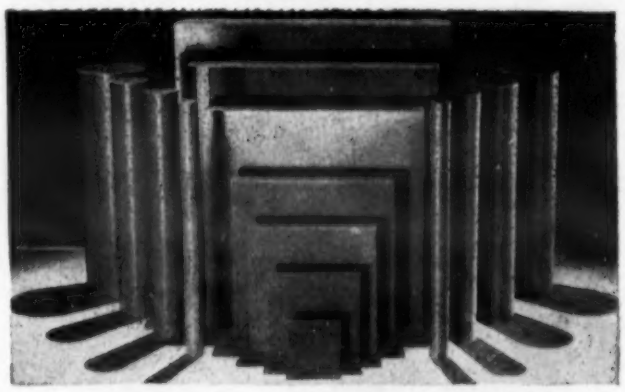


Versatile Material

The long list of uses to which plastics can be put in war industries is growing daily. The unique qualities of laminated Textolite make it applicable for use in every field. G-E laminated Textolite is easily punched, machined, sawed, stripped or sheared into an almost unlimited variety of sizes and shapes. The fact that laminated Textolite affords moisture resistance, high dielectric strength, excellent power factor, high dielectric constant, low loss factor and mechanical strength makes it ideal for today's equipment engineer. G-E Plastics engineers will help you in applying laminated Textolite to your product. For information write Section M-244, One Plastics Ave., Pittsfield, Mass.

PD-244A

GENERAL ELECTRIC

▲ Mention Item NED-5564 when writing ▲

No Shortage of IDEAL RECHARGEABLE STORAGE BATTERIES for FLASHLIGHTS

Make sure of a future battery supply for your flashlights, with Unrestricted IDEAL Rechargeable Storage Batteries. They can be recharged again and again at convenient intervals, thus providing an "always fresh" battery, and a bright, steady, dependable light . . . Conserve Critical Materials.

Outlasts 400 Dry Cells!

With one IDEAL Rechargeable Storage Battery in heavy service, as much as $10 a year can be saved on each flashlight. IDEAL Storage Batteries fit any standard size flashlight cases using 1¼" size D dry cells. Many thousands in use in leading utility and industrial plants. Chargers for recharging the IDEAL Battery available in 1, 6 or 12-cell sizes. *Prompt Deliveries.*

Write for Bulletin BB 444

GUARANTEED

IDEAL *Sycamore*

★ IDEAL COMMUTATOR DRESSER CO ★

1032 Park Avenue Sycamore, Illinois

Sales Offices in all Principal Cities

▲ Mention Item NED-5565 when writing ▲

Production Not Gadgets with—
MONARCH UNI-POINT Woodworking RADIAL SAW

LEADING war plants, woodworkers, contractors, and builders did not buy this modern tool because of trimmings put on to lure the unwary, but because with UNI-POINT you can *step up production, cut down manhours, perform a great many woodworking operations eliminating special machines.* These are not glittering generalities. Let us send to you literature describing the UNI-POINT principle of one-point cutting and UNI-POINT attachments which make this machine so fast, so versatile, so accurate,—so important to you if you fabricate wood, make boxes or crates, or have other production requirements. Send for Catalog 115.

AMERICAN SAW MILL MACHINERY CO.
Manufacturers of complete lines of modern designed woodworking and saw mill machinery, saws, and accessories.
115 MAIN STREET HACKETTSTOWN, N. J.

▲ Mention Item NED-5566 when writing ▲

A new type of wheel *plus* trained engineers who know how much the wheels can do *equals* less grinding time per job and more output per man hour

Atlantic Type AK grinding wheels, used as recommended by Atlantic engineers for weld grinding and snagging castings, have given many results like these:

Atlantic RESINOID BONDED GRINDING WHEELS

▲ Mention Item NED-5567 when writing ▲

WARM UP *the* COLD SPOTS
WITH YOUNG UNIT HEATERS

Type "V" for Vertical Air Flow — Type "SH" for Horizontal Air delivery

"Streamaire" Unit Heaters can be used to advantage whether the area to be heated is large or small. Their saving of floor space, ease of installation, efficient operation, low "first" and maintenance costs, make them desirable for existing or new buildings. If you have a heating or air conditioning problem write or consult the nearest Young representative.

YOUNG RADIATOR COMPANY
Dept. 424-J, Racine, Wisconsin, U. S. A.
REPRESENTATIVES IN PRINCIPAL CITIES

YOUNG — BUY BONDS PRODUCE MORE SALVAGE SCRAP WIN THE WAR
HEAT TRANSFER PRODUCTS

Oil Coolers • Gas, Gasoline Diesel Engine Cooling Radiators • Intercoolers • Heat Exchangers • Engine Jacket Water Coolers • Unit Heaters • Convectors • Condensers • Evaporators • Air Conditioning Units • Heating Coils • Cooling Coils • and a complete line of Heat Transfer Equipment for Aircraft.

▲ Mention Item NED-5568 when writing ▲

How to prevent inflation in one easy lesson

Put that money back in your pocket!

When a lot of people want the same thing, its price goes up.

Americans have more money today—much more—than there are things to buy with it.

So every big or little thing you buy—that you can possibly do without—cuts supplies and bids prices up on what is left.

Rising prices spell inflation. And every inflation has been followed by a cruel and bitter depression . . . men out of work, homes lost, families suffering.

We don't want inflation: we don't want another depression.

4 THINGS TO DO to keep prices down and help avoid another depression

1. *Don't* buy a thing you can do without.
2. *Never* pay more than the ceiling price. Always give stamps for rationed goods.
3. *Don't* take advantage of war conditions to fight for more money for yourself or goods you sell.
4. *Save.* Buy and hold all the War Bonds you can afford—to help pay for the war and insure your future. Keep up your insurance.

HELP US KEEP PRICES DOWN

A United States War message prepared by the War Advertising Council; approved by the Office of War Information; and contributed by this magazine in cooperation with the Magazine Publishers of America.

New Literature—Continued

REGULATORS—16-page illustrated bulletin Form No. 40 shows design and construction features of certain types of single and two-stage reduction regulators employed in welding industry—lists specifications—issued by Victor Equipment Co., 846 Folsom St., San Francisco 7, Calif.

▲ Mention Item NED-5569 when writing ▲

REFRIGERATION—Illustrated catalog No. 88-L describes line of refrigeration and air conditioning valves, fittings, service tools, dehydrators and allied items—issued by The Imperial Brass Mfg. Co., 1236 W. Harrison St., Chicago 7,

▲ Mention Item NED-5570 when writing ▲

ALTITUDE CHAMBERS—Illustrated bulletin presents information on line of altitude chambers in which manufacturer can determine how his products and materials will react and perform at any given altitude, temperature and degree of humidity—issued by Kold-Hold Mfg. Co., 525 North Grand Ave., Lansing, Mich.

▲ Mention Item NED-5571 when writing ▲

INFRA-RED HEATING—12-page illustrated bulletin Flashes No. 344 tells how infra-red can be made to work efficiently on industrial baking, drying, dehydrating and preheating problems—issued by The Fostoria Pressed Steel Corp., 1240 Harris Rd., Fostoria, O.

▲ Mention Item NED-5572 when writing ▲

More Power to You!

Greater earnings for you too—because the new Cleveland Speedaire Worm Gear Unit gives you *More Horsepower for Your Dollar!*

Speedaire offers as much as twice the capacity of standard worm units of equal frame size, when operated at usual motor speeds.

Heat generated during operation is literally *scoured off* the deeply-finned outer surfaces of the oil reservoir by a high-velocity air stream.

The new Speedaire Catalog is ready. We'll send it gladly. The Cleveland Worm & Gear Company, 3283 East 80th Street, Cleveland 4, Ohio.

Affiliate: The Farval Corporation, Centralized Systems of Lubrication
In Canada: PEACOCK BROTHERS LIMITED

Cleveland SPEEDAIRE FAN COOLED Worm Gear Reduction Units

▲ Mention Item NED-5573 when writing ▲

BAUER & BLACK Industrial Tape
PRESSURE SENSITIVE ADHESIVE

EXPERIENCE *ALONE* ISN'T ENOUGH

And we don't rely on experience *alone* . . . even though we've been making many kinds of Adhesive Tapes for nearly *fifty years.*

Before we recommend *any* tape for your needs, we go into *your* problems . . . survey *your* plant . . . and *then* draw on our experience and laboratory knowledge to help us determine the *right* tapes for the jobs you want done.

CONSERVATION SERVICE

Using the *right* Bauer & Black Industrial Adhesive Tape has saved many kinds of industries from 15% to 45% on their annual tape costs. Write or call Dept. 49 to set a time when our engineers may consult with you on the *right* application of the *right* tape for your needs.

A Product of
BAUER & BLACK
Division of The Kendall Company
2500 SOUTH DEARBORN STREET, CHICAGO 16, ILLINOIS

▲ Mention Item NED-5574 when writing ▲

Here's the Spray Booth for YOU!

- NO SPRAY NOZZLES TO CLEAN
- NO NESTED ELIMINATOR PLATES
- MAINTENANCE COSTS NEGLIGIBLE
- EXCEPTIONALLY EFFICIENT IN PAINT SPRAY CONTROL
- RECLAMATION OF PIGMENTS FACILITATED

A few of the many advantages brought you in Hydro-Whirl

THE Hydro-Whirl principle combines the proved advantages of wet precipitation with a radical departure from the conventional design, thus is ideally suited for the collection and safe handling of practically all finely divided, linty and adhesive industrial dusts. It also answers the problem of precipitating pigments from the overspray in paint spraying operations.

The same patented Hydro-Whirl principle of cleaning exhausted air used in Peters-Dalton Booths is also employed in our dust collectors. *Send for Catalog*

PETERS-DALTON *Incorporated*
632 EAST FOREST AVE. • DETROIT 1, MICH.
(Formerly Industrial Sheet Metal Works)
MFRS. HYDRO-WHIRL DUST COLLECTORS AND SPRAY BOOTHS—INDUSTRIAL OVENS, MECHANICAL WASHERS AND VENTILATING SYSTEMS

▲ Mention Item NED-5575 when writing ▲

The ANSWER to Your Heating Problems

ELECTRIC HEATERS & Controls

AMINCO LoLag

For building into your electrically-heated manufactured products, or for applying heat to your process work, or for heating otherwise hard-to-heat rooms, etc., you can depend on Aminco LoLag Electric Heating Units and time-tested Controls to do the job dependably, economically, cleanly and safely, which is attested by their incomparable service record over a long period of years. There are various types, sizes and ratings for any heating requirement.

Bring your heating problems to Aminco heating specialists who have engineered the application of electric heaters and automatic controls in every conceivable type of electrically-heated equipment.

WRITE FOR BULLETIN NED-2075

Left: Flexible immersion type of Aminco heater available in lengths up to 13 ft. and easily bent to fit any vessel. Right: Pipe-thread type for screwing into various types of vessels.

Various other types are available

AMERICAN INSTRUMENT CO.
8010 GEORGIA AVENUE • SILVER SPRING, MARYLAND

▲ Mention Item NED-5576 when writing ▲

Silver King Mechanical Counters are typical of modern design improvement that assures dependability and long service life.

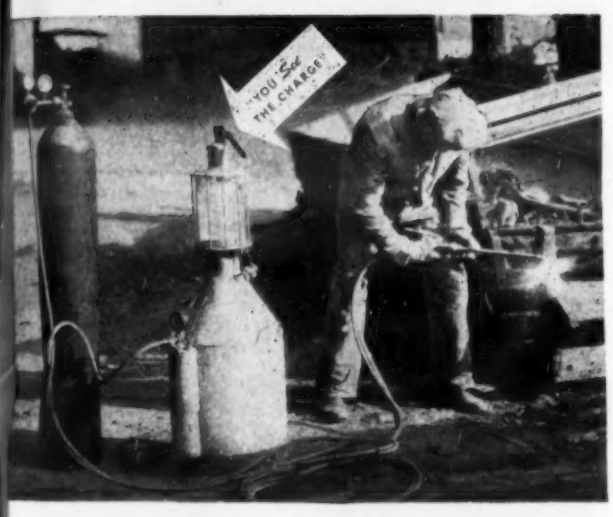
Marked improvements in production control efficiency are achieved thru the application flexibility and performance dependability of our Mechanical and Electric Counters.

These Modern Counters are made in many types and sizes to meet widely varying requirements. Our specialized experience is available in their application to your needs.

For suggestions just tell us what you want to do.

Production Instrument Company
700-12 W JACKSON BLVD CHICAGO 6, ILL.
Manufacturers of Counting, Timing and Recording Devices

▲ Mention Item NED-5577 when writing ▲



2400% Profit!

THE Sight Feed Acetylene Generator pictured herein has been on the job, indoors and out, for more than 20 years. Its owner says it has brought him more than a 2400% return on his original investment. Maintenance expense has been less than $10 in all the 20 years of trouble-free, profit-making service. Sight Feed will do as well for YOU in the next 20 years. Order today.

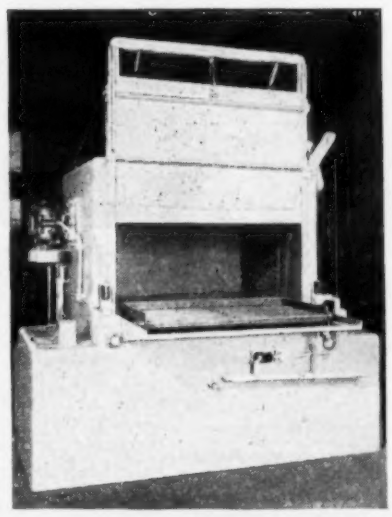
THE Sight Feed GENERATOR COMPANY
Sales: Richmond, Indiana • Factory: W. Alexandria, Ohio

▲ Mention Item NED-5578 when writing ▲

RANSOHOFF

EQUIPMENT FOR THE SURFACE TREATMENT OF METALS
RANSOHOFF CABINET TYPE

WALKING SPRAY WASHER



THE last word in practical application of a "walking spray" which moves back and forth across the work, reaching every bit of it. This cuts down the number of spray holes and permits the use of low gallonage pumps which reduces initial and operating costs.

The RANSOHOFF WASHER may be equipped for wash only or for wash and rinse and if desired, a hot air blower may be added for drying. For small parts up to large assemblies.

Illustrated: for cleaning rear axle housings. Work is placed on movable tray, pushed into cabinet and door closed. Wash pump is started and the "walking spray" moves back and forth insuring complete cleaning of work.

N. RANSOHOFF, Inc. 1315 Township Ave. CINCINNATI, OHIO

▲ Mention Item NED-5579 when writing ▲

New Literature—Continued

STARCH—16-page illustrated booklet on Amioca tells physical and chemical properties of this domestic starch and lists many industrial applications—issued by Technical Depts. of American Maize-Products Co., National Starch Products Inc., and Stein, Hall & Co., Murray Hill Bldg., New York 17, N. Y.

▲ Mention Item NED-5580 when writing ▲

COLOR CONDITIONING — 20-page illustrated booklet, "Three-Dimensional Seeing, The Science of Color and Light for Better Vision in Industry" contains information derived from color-conditioning installations in more than a thousand plants—issued by Finishes Div., E. I. duPont de Nemours & Co., Wilmington 98, Del.

▲ Mention Item NED-5581 when writing ▲

ULTRA-VIOLET GERMICIDAL UNITS—8-page illustrated catalog No. 544 presents information on Disinfectaire ultra-violet germicidal units for disinfection of air in hospitals, industrial plants, schools and institutions—issued by Art Metal Co., 1814 East Fortieth St., Cleveland 3, O.

▲ Mention Item NED-5582 when writing ▲

BLIND FASTENER—4-page illustrated catalog section No. 12050 describes Rivnut blind fastener which serves as nut-plate, rivet or both—includes step-by-step description of installation—issued by The B. F. Goodrich Co., Dept. E, 500 South Main St., Akron, O.

▲ Mention Item NED-5583 when writing ▲

PNEUMATIC CHIPPERS—22 x 38-inch illustrated wall chart is entitled "Easy Repair Operations for I-R Flapper Valve Chippers"—chart shows various parts and recommended maintenance operations—issued by Ingersoll-Rand Co., 11 Broadway, New York 4, N. Y.

▲ Mention Item NED-5584 when writing ▲

GASKETS—20-page illustrated catalog No. 202 gives information on Ajax spiral wound high and low pressure gaskets—line includes gaskets of all types for power, municipal, chemical and industrial installations—issued by United States Gasket Co., 1502 Pierce Ave., Camden, N. J.

▲ Mention Item NED-5585 when writing ▲

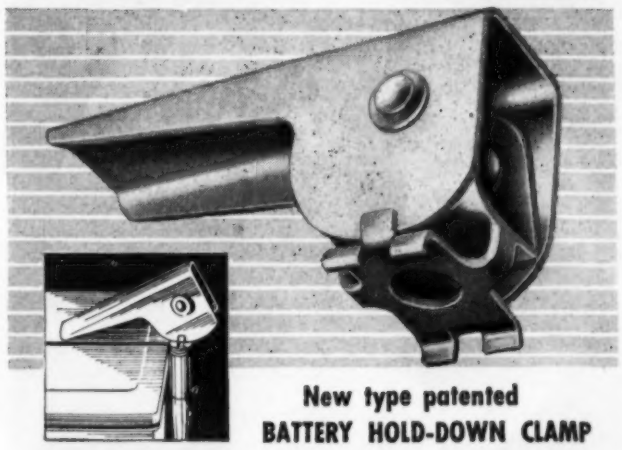
CENTRALIZED LUBRICATION—16-page illustrated bulletin No. 25 shows how centralized lubrication systems increase production output of machinery and at same time make savings in time, power and lubricating materials—issued by The Farval Corp., 3249 E. Eightieth St., Cleveland 4, O.

▲ Mention Item NED-5586 when writing ▲

CHEMICAL MACHINERY — 583-page illustrated book, "Chemical Machinery", by E. R. Riegel, Ph.D., is elementary treatise on equipment for process industries—each group of related devices forms a chapter with an introduction containing classification in tabular form—numerous quotations of money costs of devices are included—price of book is $5.00—issued by Reinhold Publishing Corp., 330 W. Forty-Second St., New York, N. Y.

▲ Mention Item NED-5587 when writing ▲

SPEEDS BATTERY SERVICING



New type patented BATTERY HOLD-DOWN CLAMP

Replaces wing nuts, safety wiring, etc., greatly speeding battery removal. The positive locking Cam action will withstand severe vibration, but is easily released manually. Full ARMY and NAVY approval has been obtained. Standard sizes immediately available are:

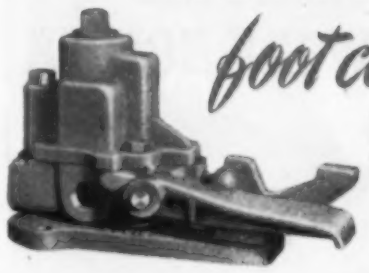
Part No.	Nut Size
5022 - 1	3/16 - 10 - 32
5022 - 2	1/4 - 20
5022 - 3	1/4 - 28
5022 - 4	5/16 - 24
5022 - 5	3/8 - 24

Samples upon request

THE PAUL HENRY COMPANY
2037 SO. LA CIENEGA BLVD. • LOS ANGELES, CALIFORNIA

▲ Mention Item NED-5588 when writing ▲

free busy hands with



foot control **Hanna "tip-toe" action** *foot operated* **Valves**

Hanna Foot Operated Valves leave both hands free for full-time use in holding work, feeding and removing pieces, or for any other advantage that an "extra" hand can give to an operation. Foot Control with Hanna Valves can help speed production through increased operator efficiency. Operator fatigue is reduced by this effortless "tip-toe" action: the treadle when depressed is but 1-5/8" from the floor and 2-1/8" in its "up" position—a movement of only 1/2" is required for operation.

Hanna Foot Valves are available in 3/8" and 1/2" pipe sizes. Use them for your controls and free busy hands for full-time work.

Send for the Hanna Valve Bulletin.

HANNA ENGINEERING WORKS
1765 ELSTON AVENUE • CHICAGO 22, ILLINOIS
RIVETERS • CYLINDERS • AIR HOISTS

▲ Mention Item NED-5589 when writing ▲

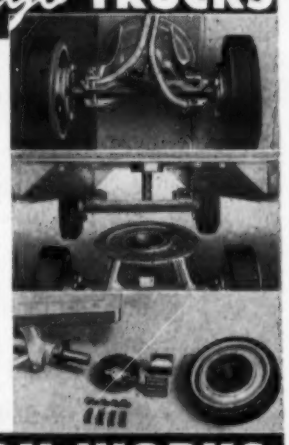
POWERFUL

MADSEN *Cargo* TRUCKS

...WITHSTAND THE JOLTS AND SHOCKS OF LOADING

It's a 4-wheel hand truck with an all-welded steel chassis and two 5 inch channel steel strongbacks. Has a 12-inch cast steel fifth wheel and a heavy (1 3/4" thick) planked deck with steel frame. Ring-grip drawbar and coupling hitch two or more trucks together in a train. Solid semi-steel wheels with solid rubber tires or plain metal-crowned rims are available.

WRITE FOR CATALOG!



MADSEN IRON WORKS
HUNTINGTON PARK, CALIFORNIA

▲ Mention Item NED-5590 when writing ▲

THE *first* FIRST-AID in the TREATMENT of INDUSTRIAL BURNS

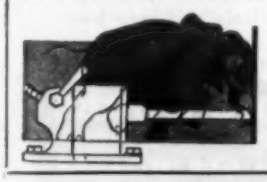
Burns account for 4½% of industrial accidents and total millions of man-hours lost. Reduce this waste. Treat burns quickly (within 15 minutes of occurrence) and minimize the possible cycle of blister formation, infection and incapacitation. Gebauer's Tannic Spray is especially useful for the "quick treatment" of first, second, and small area third degree burns. A stable, antiseptic, tannic acid solution packaged in a self dispensing bottle. Simply "press the lever" and direct an antiseptic, soothing spray over burn area. Nothing to mix—no time wasted. Evaporates rapidly covering burn with a protective tannic acid film. Keep a package in every first-aid kit and in departments where burns occur frequently. Available at physician supply stores, safety equipment dealers and most drug stores. Literature will be sent on request.

THE GEBAUER CHEMICAL CO.
9324 St. Catherine Ave., Cleveland 4, Ohio

▲ Mention Item NED-5591 when writing ▲

New MEAD
FLAT TOP WORK HOLDER
Ready

This new type of air-operated fixture for holding small flatwork for toolroom use or production operations solves a troublesome problem. Mead "Flat Top" holds any work which is flat on the bottom, regardless of peripheral contour. Assures "dead true" perpendicularity for drilling, reaming, tapping operations. Completely described in the new Mead Air Power Catalog . . . just out.



MEAD SPECIALTIES COMPANY
15 SOUTH MARKET STREET
DEPT. 94-NA • CHICAGO, U.S.A.

▲ Mention Item NED-5598 when writing ▲

GOT IT!

AN ADJUSTABLE TOOL HOLDER

Only the Clark Lathe Tool Holder has all these Exclusive Features.

1. Each Holder accommodates four or more sizes of square or round tool bits.
2. Vise grip jaw rigidly clamps short tool bits.
3. Dual or narrow tool bits are firmly held for cutting-off or special forming operations.
4. Solidly grips and supports carbide bits and boring bars.
5. Vise grip holds bits of brittle alloys more securely without breakage.
6. Tilted position of screw and head provides unobstructed view of work.

Adjustable Vise Grip jaw gives full bearing for tool bits and even distribution of pressure.

Each Clark Tool Holder will grip not one but four sizes of tool bits. Complete range of shank sizes with 15° cutter channel; also parallel type for Carbide cutters and boring bars, right and left hand offset.

See Clark Exhibit K-617
National Metal Congress, Cleveland, Ohio
October 16th through 20th

See Your Jobber Now! Or Write For Bulletin NED-9

Robert H. Clark Company
9330 Santa Monica Boulevard Beverly Hills, California

▲ Mention Item NED-5599 when writing ▲

New Literature—Continued

ELECTRICAL DISTRIBUTION DUCTS—12-page illustrated bulletin No. 427-1 presents information on BUStribution duct of ventilated low reactance type for feeder circuits up to 2000 amperes—issued by BullDog Electric Products Co., 7610 Jos. Campau Ave., Detroit, Mich.

▲ Mention Item NED-5600 when writing ▲

PLASTIC FOR TOOLS—4-page illustrated folder explains properties, characteristics and procedures of Toolite, ready-compounded plastic for casting tools, dies and fixtures—material has high impact strength, uniformity and durability—issued by Adhere, Inc., 1220 S. Maple Ave., Los Angeles 15, Calif.

▲ Mention Item NED-5601 when writing ▲

FASTENING DEVICE—16-page illustrated catalog No. 444 is descriptive of Simlok fasteners—explains features including basic principle that it fastens and unfastens two sheets of metal or plywood without requiring screwing and unscrewing bolts—issued by Simmons Machine Tool Corp., 1000 N. Broadway, Albany, N. Y.

▲ Mention Item NED-5602 when writing ▲

PNEUMATIC TOOLS—32-page illustrated catalog covers line of rotary pneumatic tools for small tool jobs such as drilling, grinding, nut-setting, burring and other operations—speed couplers, accessories and line of impact wrenches are also described—issued by Aro Equipment Corp., Erie St., Bryan, O.

▲ Mention Item NED-5603 when writing ▲

FLOOR RESURFACER—6-page illustrated folder is descriptive of Ruggedwear floor resurfacer for industrial floors and is recommended for application over concrete, brick, stone, composition, steel or wood, indoors or out—makes surface resilient, comfortable to feet and non-slip whether wet or dry—issued by Flexrock Co., 3603 Filbert St., Philadelphia 4, Pa.

▲ Mention Item NED-5604 when writing ▲

BROACHING—97-page illustrated book, "Broaches and Broaching", is intended to bring industry comprehensive discussion of broaching practice, to call attention to rapid progress in broaching field and to emphasize application of broaching to both war and post-war production—price is $3.00—issued by Broaching Tool Institute, 74 Trinity Place, New York 6, N. Y.

▲ Mention Item NED-5605 when writing ▲

PROCESS LINERS & PAPERS—8-page illustrated booklet is devoted to process liners and papers used extensively in rubber industry—contains valuable suggestions for using them most efficiently—issued by Cleveland Liner & Mfg. Co., 5508 Maurice Ave., Cleveland 4, O.

▲ Mention Item NED-5606 when writing ▲

PACKAGING—766-page illustrated 1944 "Packaging Catalog" is keyed to theme of reconversion—it projects great wartime advances of packaging into postwar era—contains much new material—price is $2.50 per copy; foreign, $3.50—issued by Packaging Catalog Corp., 122 E. Forty-second St., New York 17, N. Y.

▲ Mention Item NED-5607 when writing ▲

AJAX Tubular LO-VEYORS

Convey Inflammable, Explosive, Abrasive and Deliquescent Materials

Ajax Tubular Lo-Veyors provide sealed-in, gas-tight protection from critical process operations. Sealed tube eliminates contamination from air-borne dust, abrasives, gases, moisture and fumes.

Write for new Bulletin 32 just off the presses

AJAX FLEXIBLE COUPLING CO.
Incorporated 1920 WESTFIELD, N. Y.

▲ Mention Item NED-5608 when writing ▲

GEARS. ■ ■ There are always good reasons behind superiority—and this holds particularly true in the making of gears. Fairfield's gear processing and engineering services have behind them the accumulated knowledge and skill of more than 25 years of experience in making gears for leading manufacturers and complete, modern plant facilities for making and testing gears. Consultation with Fairfield on any and all gear problems brings immediate dividends in satisfaction.

FAIRFIELD MANUFACTURING CO.
317 S. Earl Avenue, Lafayette, Ind.

ARMY E NAVY
FAIRFIELD For FINE GEARS

▲ Mention Item NED-5609 when writing ▲

NEW Angle Adaptor

Converts any drill press into a versatile multi-purpose machine.

Permits any spindle angle . . . at any height . . . horizontally or vertically.

Simplifies clumsy operations . . . speeds production . . . eliminates operator fatigue.

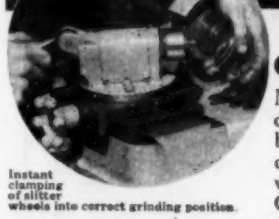
Makes burring, sanding, buffing, grinding, angle drilling, polishing, rotary filing, wire brushing, tapping, reaming, honing, etc., more convenient, twice as fast!

Adaptable to all drill presses with tubular columns . . . rigid construction . . . POSITIVE LOCKING. Write now for descriptive literature, details.

NOBUR MANUFACTURING COMPANY
906 North Orange Drive, Los Angeles 38, California

▲ Mention tem NED-5610 when writing ▲

NEW ESSENTIAL MAINTENANCE TOOL



Instant clamping of slitter wheels into correct grinding position.

Price Complete with Motor
$210.00
F.O.B. DOWNINGTOWN, PA.

JOHNSTONE
Engineering & Machine Co.
DOWNINGTOWN, PA.

for "Any Make"
OF SCORE CUT SLITTER

Mills having score cut slitting machines for paper, board, textiles, rubber, rubberized fabrics, osnaburg cloth, etc., will appreciate the fact that with the Johnstone Slitter Wheel Grinder, they can recondition wheels themselves, without returning them to the manufacturer. Time and shipping delays are avoided and, in addition, they can get along with fewer wheels. The operation of this grinder is so simple that a schoolboy can unfailingly obtain a master mechanic's accuracy. It operates on any standard lighting circuit, weighs 170 lbs. and its size is 20" wide, 26" deep, and 10" high. Information on request.

▲ Mention Item NED-5611 when writing ▲

Our large, modern plant is tooled-up to take care of your Gear orders whether large or small—any quantity—any material—any size. We also produce Sprockets for Roller and Silent Chain Drives.

We are noted for our precision workmanship, minute inspection, quality and dependable service.

P.S. We maintain a large, precision surface grinding department and can offer you time on our production machines. Ask for details.

"Industrial"

Cut Gears • Cut Sprockets • Cut Racks

INDUSTRIAL GEAR MFG. CO.
4541 VAN BUREN STREET · CHICAGO 24, ILLINOIS

▲ Mention Item NED-5612 when writing ▲

GEON VINYL RESINS & PLASTICS–Versatile Synthetics offered by Chemical Division

FROM GEON may be made a wide variety of flexible thermoplastics that can be extruded, pressure or injection molded, calendered, cast into sheet and film, or used as coatings for fabrics and paper. Here are a few industries which have already found important — and, in some cases, revolutionary — new uses for GEON:

Electrical, Metals, Textile, Plastics, Paper, Food and Beverage, Rubber, Plumbing, Shoe.

The number of uses yet to be discovered seems limitless. There may be worth-while applications in your business. For an informative folder which describes GEON'S properties and suggests applications, or for answers to your questions, write Department P-2, Chemical Division, The B. F. Goodrich Company, Rose Building, Cleveland 15, Ohio.

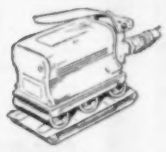
GEON is available to industrial users subject to allocation under General Preference Order M-10. Limited quantities can be had for experiment.

▲ Mention Item NED-5613 when writing ▲

Now Available . . .

STERLING SPEED-BLOC SANDER!

Produces a smooth, uniform surface in less than ⅓ the time required by hand sanding. The Speed-Bloc is available for prompt delivery . . . now is the time to benefit from its time and money-saving advantages.



Ideal for dry and wet sanding. Air driven, absolutely safe to use with volatile liquids.

Speed-Bloc sanding pad oscillates at high speed, making over 3000 back-and-forth strokes per minute. Over 19,000 Speed-Blocs now used by auto shops, aircraft plants, furniture manufacturers and a host of other industries. Ask your local distributor for a free demonstration or write!

STERLING TOOL PRODUCTS CO.
1169 EAST OHIO STREET · CHICAGO 11, ILLINOIS
Los Angeles and Toronto

▲ Mention Item NED-5614 when writing ▲

NEW EQUIPMENT DIGEST

Registered U. S. Patent Office

MECHANICAL IMPROVEMENTS • INDUSTRIAL LITERATURE
NEW PRODUCTS AND MATERIALS

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September, 1944

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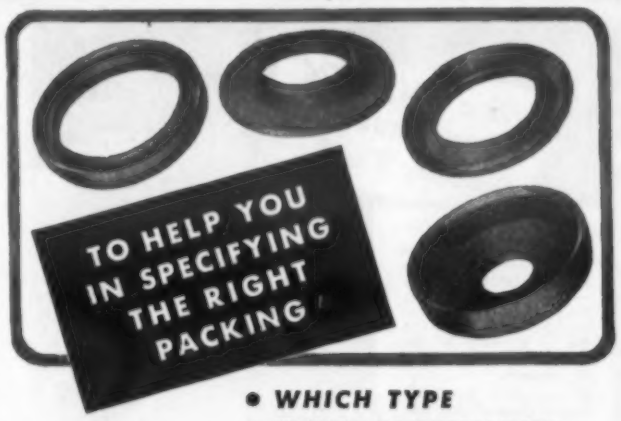

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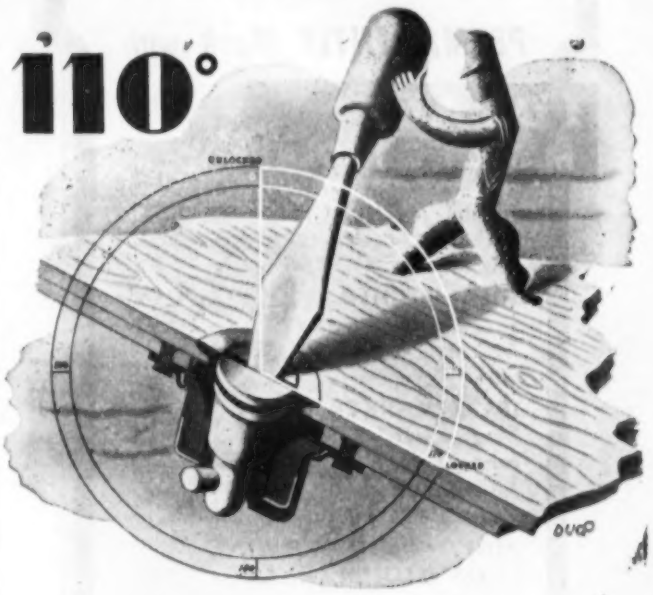

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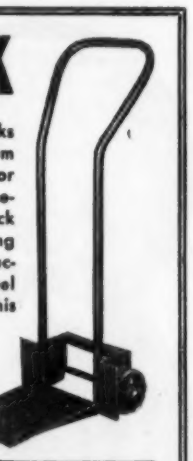

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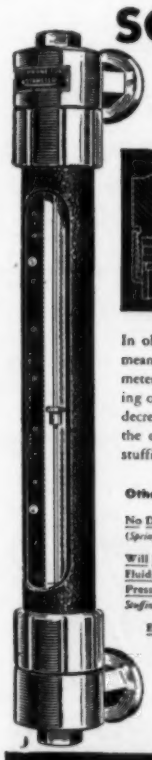

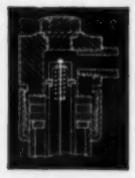

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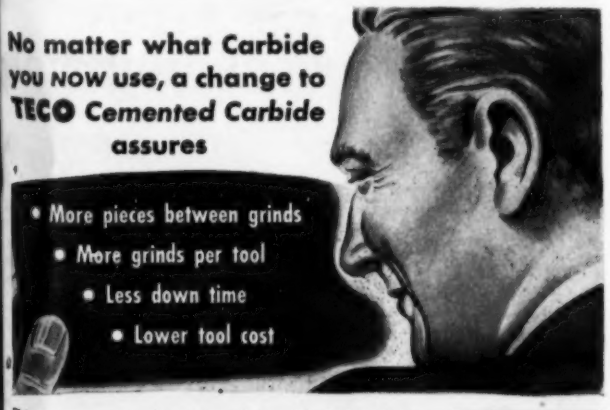

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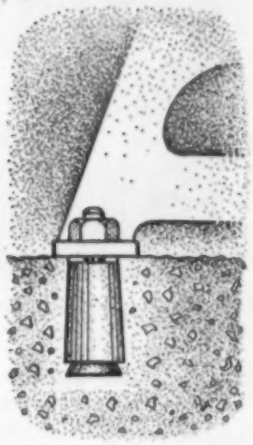

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THE ONLY CENTERLESS GRINDING WHEELS WITH ALL 3:

1. **Fractional Grades** ... a choice of three degrees of hardness in every grade. Enables you to "fit the grade to the grind" better ... arrive at correct tolerances faster.
2. **H-9 Vitrified Bond** ... so tenacious that less is needed to hold abrasive grains. Thus wheels can be more porous —cooler cutting.
3. **Controlled Porosity** ... a precise method of spacing cutting units. Assures exact duplication of wheels.

See for yourself why these Bay State Grinding Wheels have made such an outstanding record in war production. Write for folder giving complete details and recommendations.

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BLUE Z FLASH GRINDING WHEELS FAST and COOL

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positive identification*
of STEEL STOCK
a simple one-man job

The Identometer test is quick and accurate. Using a known sample of most rolled or forged ferrous alloys, a quickly trained workman can instantly check material of almost any size or shape to spot "off specification" stock, or to separate stocks that have been mixed.

This device, operating on the principle of thermo-electricity, is an important piece of news to manufacturers whose finished products must be made of accurately controlled ferrous alloy content to pass inspection.

Read the whole story of this new metallurgists' tool. An 8-page folder tells what it is and how it works. We'll mail a copy to you promptly on request. Just ask for Bulletin 35. Address—DRAVO CORPORATION, *National Department*, 300 PENN AVENUE, PITTSBURGH 22, PA.

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*IDENTOMETER

AN ELECTRICAL INSTRUMENT FOR THE INSTANT AND ACCURATE IDENTIFICATION OF MOST ROLLED OR FORGED FERROUS ALLOYS BY THE USE OF REFERENCE SPECIMENS

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REMOTE CONTROL problem?

SPERRY'S EXACTOR HYDRAULIC CONTROL MAY SOLVE IT

Sperry's EXACTOR HYDRAULIC CONTROL, by means of a flexible, unique, single-tube system, has solved hundreds of remote control problems for design engineers in many industries.

Accurate and self-contained, requiring no special engineering to install or maintain, the EXACTOR HYDRAULIC CONTROL is well worth investigating.

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Sperry's EXACTOR HYDRAULIC CONTROL is rated at 400 inch-pounds on the pressure stroke and 100 inch-pounds on the spring-return stroke.

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HOBOKEN • NEW JERSEY
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Gentlemen: Please send me, at no cost, a copy of your Bulletin 79-D containing complete details on your EXACTOR HYDRAULIC CONTROL.

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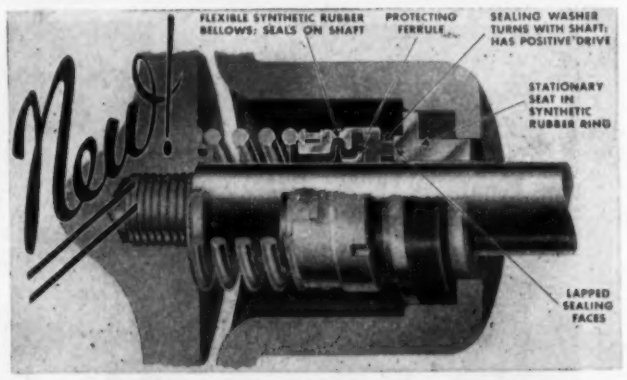

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Delivers clean, dry PARTS. Removes oil, grease and chips. Provides low cost operation.

Active SOAK

Operating Up and Down into the Tank

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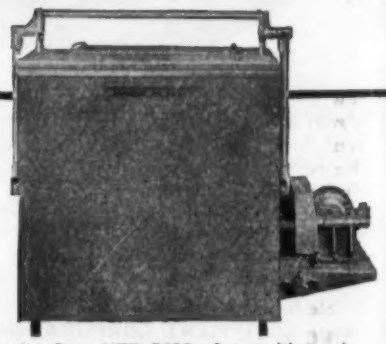

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Century Explosion Proof motors protect you, your employees, and your plant against explosions and fire when they are located in atmospheres charged with explosive mixtures of alcohols, acetone, lacquer solvent vapors, natural gas, petroleum products, gasoline, naphtha, grain dusts, and other explosive dusts. These explosive hazards come under classifications Class I Group D and Class II Group G of the Underwriters' Laboratories.

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Century C MOTORS

CENTURY ELECTRIC CO.
1806 Pine Street, St. Louis 3, Missouri
Offices and Stock Points in Principal Cities

385

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Titan

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BELLEFONTE, PENNA.
NEW YORK • CHICAGO • SAN FRANCISCO
A Great Name in Brass and Bronze Since 1915

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★ Widely used YM process now *continuous and automatic.*

★ For lubricating oil including aircraft engine oil—YM removes fuel dilution, water, acids, carbon, dirt and similar matter from dirty oil.

★ Restores used oils to the same viscosity, fire and flash, neutralization number, precipitation number, emulsion test, color, etc., as the new parent oil.

★ Reclaimed oil can be re-used in the same manner and place as the new parent oil.

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THE YOUNGSTOWN MILLER COMPANY, SANDUSKY, OHIO

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Powerful rust-proof lugs bind all staves at all joints

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Any capacity. Any type conveyor.

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Many years experience and broad guarantee. Get catalog.

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CAMDEN, OHIO
Est. 1894

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ROD BABBITTING

There's more to babbitting connecting rod bearings than simply applying the metal. Not only must the work be expertly done, but it is important that frequent detailed chemical analyses be made of materials in order to provide a dependable safeguard against inferior quality bearing metal, and to assure constant uniformity.

Wisconsin Engine connecting rod bearings are babbitted in our own plant, under our own complete control. A careful check is maintained to make sure that the metal is always what it *should* be and that it is applied *the way it should be.* This helps to make a better engine . . . designed to give better service on your equipment.

Most H.P. per pound

WISCONSIN MOTOR Corporation
MILWAUKEE 14, WISCONSIN, U. S. A.
World's Largest Builders of Heavy-Duty Air-Cooled Engines

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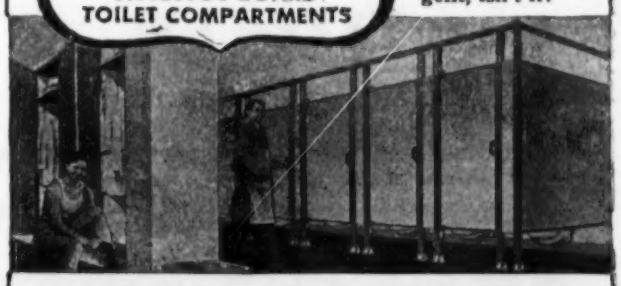
—and whose fault it wasn't clean, yours or your employees'? Employees will respect toilet facilities —if such facilities are up to the ***American Standard*** for such things. Defacement of this poster indicates a cynical attitude arising from resentment against inadequate, poorly maintained sanitary facilities— ***and hurtful to your efforts to get more production from men and machines and to decrease material losses!*** Urgent, isn't it?

Sanymetal* ASBESTOS BOARD TOILET COMPARTMENTS



Save Time and Money by Installing Sanymetal Toilet Compartments: Sanymetal offers two types of wartime toilet compartments; types for both temporary and permanent installations. Sanymetal Toilet Compartments are economically designed and built by specialists with over 29 years of experience, and embody convenience and sanitation in a degree unappreciated and unapproached, and usually overlooked by those lacking Sanymetal's long experience in this line. ***Doors and partition panels of Sanymetal Toilet Compartments*** are manufactured of asbestos-board 1⅜ inches thick, consisting of two sheets of compressed cement asbestos-board, laminated to two sides of a rigid, structural core of insulation board, resulting in a strong, rigid panel that is moisture, fire and wear resistant. ***Sanymetal Toilet Compartments provide a durable and rigid installation,*** free from dirt-collecting pockets and ledges, easy to keep clean. ***One order, one priority covers everything*** you need for complete installation of Sanymetal Toilet Compartments, even complete door hardware and partition fittings. ***Houseclean your toilet facilities now*** and safeguard the health of your workers. Use coupon for Bulletin No. 940—gives complete information on Sanymetal Asbestos-Board Toilet Compartments. For quick action, see "Partitions" in your phone book for local Sanymetal Representative. A special toilet room house-cleaning check list is available on request.

THE SANYMETAL PRODUCTS CO., INC.
1719 URBANA ROAD • CLEVELAND, OHIO

* TRADE MARK REG. U. S. PAT. OFF.

Sanymetal* TOILET COMPARTMENTS

The SANYMETAL PRODUCTS CO., Inc., 1719 Urbana Rd., Cleveland, O.
Please send us your Bulletin No. 940 on Sanymetal Asbestos-Board Toilet Compartments and Housecleaning Check List.

Name_____ Position_____

Address_____

City_____ State_____

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Stearns MAGNETIC BRAKES for Printing PRESSES

"We have never had one of them out since installed so that the maintenance has been practically nil," writes Gen. Sup. Alger of the successful Neo Gravure printing firm. He uses Stearns Magnetic Brakes with the impression lifting drive on his huge presses.

Just one of many profitable applications for Stearns Magnetic Brakes. Perhaps we can help you. Tell us about your problem. Ask for Bulletin 604.

A.C. or D.C. Magnetic brakes for motor or machine mounting

STEARNS MAGNETIC MFG. CO.
653 S. 28th St. Milwaukee 4, Wis.
SEPARATORS, PULLEYS, DRUMS, MAGNETS

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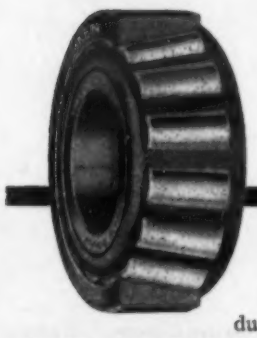
A SURE SIGN OF MODERNNESS IN EQUIPMENT OF ANY KIND



Progress often means finding new uses for old products; this is so with Timken Tapered Roller Bearings. Their adaptability to any and all operating conditions is an important factor in the development of new equipment and the improvement of existing machines. Thus "Timken Bearing Equipped" is a sure guide to top-notch performance wherever you find it. The more Timken Bearings there are, the better the performance. The Timken Roller Bearing Company, Canton, Ohio.

TIMKEN
TRADE-MARK REG. U. S. PAT. OFF.
TAPERED ROLLER BEARINGS

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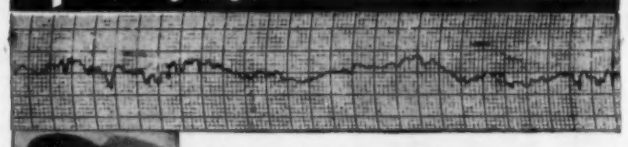
Proof of a Better Finish



Half a Century of Specialization has Established our Reputation as the Small Wheel People of the Industry.

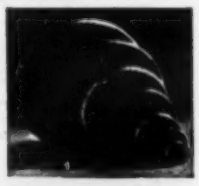
Each small square represents 1.0 micro inches. Micro inch r.m.s. 0.9—1.6

Surface Analyzer Tape Proves You Get A Better Finish With Chicago Wheels

These results were obtained at a rate of 10 pieces per hour in an aircraft parts plant. Material, X-13-15, Rockwell 60 to 57, grinds out .006 to .007 stock. Chicago Wheel used, ½ x ½ x ⅛", Grain 180, Grade L Arcite FV Bond. Spindle Speed 40,000 r.p.m. Lapping and super finishing eliminated on this job.

Can you match that finish? Sounds phenomenal, but you can do it with Chicago Wheels. And, the secret of their superiority lies in the new FV Bond, developed exclusively for Chicago Wheels, after 50 years' experience making wheels for the most accurate and precise applications.

New Featuring Wheels Up to 3" in Diameter
For the duration, with full WPB approval, we are specializing on the small sizes — anything up to 3" in diameter.



Write for Catalog and one of the new Engineering Survey Forms, a step in the direction of better finishing.

CHICAGO WHEEL & MFG. CO.
1111 W. Monroe St., Dept. NE, Chicago 7, Ill.

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New Literature—Continued

ARC WELDING—20-page illustrated vest pocket guide contains information and suggestions for welding operators to improve their work—issued by The Hobart Bros. Co., Hobart Square, Troy 1, O.

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DRAWING & TRACING PAPER—6 sheets of three-dimensional drawings show excellence of Craftint Double-tone drawing and tracing paper in preparation of handbooks and manuals and engineering drawings—issued by The Craftint Mfg. Co., 210 St. Clair Ave., N. W., Cleveland 13, O.

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UNDERWATER CEMENT—6-page illustrated folder is descriptive of Subac cement which is especially adapted for underwater repairs and construction—cement will not segregate or separate when exposed to washing action during or after application—method of application is outlined—issued by The Crandall Engineering Co., 261 Franklin St., Boston 10, Mass.

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METAL CONVEYOR BELT—24-page illustrated catalog No. 3 contains information on Cyclone metal conveyor belt—various types of belts and applications are shown—issued by Cyclone Fence Div., Waukegan, Ill.

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PLASTICS—17-page illustrated bulletin No. 4404 is entitled, "Plastics . . . The Pressure Processing Of Synthetic Resins"—bulletin was prepared for postwar planners considering plastics—describes materials, processes and equipment for most types of plastic product production—issued by The Hydraulic Press Mfg. Co., 100 Marion Rd., Mount Gilead, O.

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MAINTENANCE PRODUCTS—8-page illustrated brochure, "From Foundation to Flagpole", features construction and maintenance of buildings of various types and design in which line of products including floor treatments, waxes, paints, varnishes, enamels, caulking compounds, roof coatings and waterproofing compounds are used—issued by Building Products Div., L. Sonneborn Sons, Inc., 88 Lexington Ave., New York 16, N. Y.

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CONVERSION—24-page illustrated booklet, "Case Histories to Aid You in Blueprinting Conversion to Peace", shows spectacular results achieved by certain plants in converting to war in order to suggest equally spectacular results that may be accomplished when reconverting to peacetime operation—stresses important role of conveying systems—issued by Lamson Corp., 2000 Lamson St., Syracuse 1, N. Y.

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INDUSTRIAL FACILITIES—16-page illustrated booklet describes facilities, personnel, war and peacetime products of company—issued by The Turner Brass Works, Sycamore, Ill.

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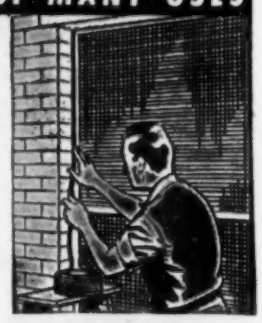

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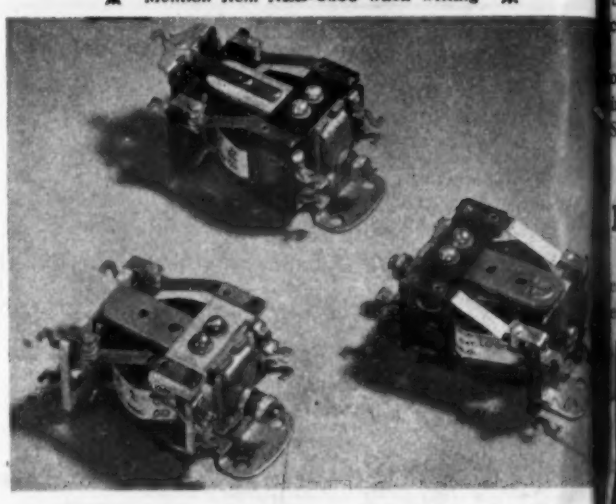

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